

Bird

AUDIO / VIDEO RECORDERS

USERS MANUAL

RELEASE 6.0

01/04/2006

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SECTION - 1

INTRODUCTION

The Bird support unit code combines the USBIRD and USBI software. To keep this manual down in size the obvious settings and displays will not be covered. The term **"RECORDER"** and **"BIRD"** will be used when referring to the HAWK, FALCON, EAGLE8 /A/B/C, FLEX8C, and all other ADS recorders with built in **USB** port. The USBI software is used with the EAGLE 2/4C, FBIRD8... A more descriptive list which details which recorders belong to a specific software can be found in Appendix G. Bird and USBI software are similar in use. Since the HAWK is the first of the new family to be released, the terminology in this manual will be "HAWK", however the **EAGLE8 / A and all new ADS recorders will use this PC program for interface and data archive.**

For the hardware description of the HAWK, FALCON, EAGLE8/ A/B/C, MONO8, FLEX8C and other recorders refer to Sec- 6, Sec-7, and Sec-8.

Section- 9 describes the USBirdPLAYER program that is used to play any **"audio"** and **"video"** data CD or DVD. The USBirdPLAYER and Fbplayer programs, are automatically written to the "CD" or "DVD" can also be installed on any computer that contains a CD-ROM and a sound card. The installation steps are the same as given below. **For help, call ADS at 949 955-3103.**

1.1 INSTALLATION

The software is supplied on one CD. It can also be retrieved from our Web Site at (www.adaptivedigitalsystems.com) under Windows Support Code. Instructions are shipped with every update and are also on the website. A copy is included below. **The CD contains the following folders:**

- 1- Bird – used with any DRSU and PDR2**
- 2- UBPLAYER and FBPLAYER – used to playback audio/video recordings**
- 3- Windows Media Player- used to playback .AVI and .WAV files**
- 4- MJPG_CODEC – used to compress HAWK video files**
- 5- Bird_Manual - a PDF copy of this manual**
- 6- Bird_Install - a PDF instruction guide to load software.**

For new software installation follow this order:

1. Install Bird software. Refer to Appendix A.
2. Install MJPEG Codec. The codec converts the files into usable AVI files. Refer to Appendix B.
3. Optional - Windows Media Player 7.1. If your computer does not correctly display AVI files, install new Windows Media Player. Refer to Appendix C
- 4 **Finally, you must reboot your computer**

After the installation, if you do not have a shortcut icon for the Bird or the “USBirdPLAYER” program you can go into Windows Explorer and open C:\PROGRAM FILES\ADS\Bird. From there you can drag the shortcuts “blue icons” {Bird.EXE and UBplayer.EXE} out by pointing to it and holding down the left mouse button as you drag it off the screen.

SYSTEM REQUIREMENTS

The CPU should be at least Pentium III or higher with 600 MHz processing speed, 128 Megabyte RAM, and at least 20 Gigabytes of hard drive space. The supported operating systems are Windows 98, 2000, XP, and ME.

1.2 RUN PROGRAM

To run the PC program, click on the shortcut “Bird”. You may use the normal keyboard or the keypad on the screen.

NOTE!!! The very first time you connect the HAWK or USBI to the computer, in order for the operating system (WIN-98, WIN- 2000, XP) to detect a new USB device you will need to configure system files, WINDRVR6.sys . These files can be found in C:\Program Files\ADS\BIRD\Drivers. The Found New Hardware Wizard will finalize USB DEVICE installation.

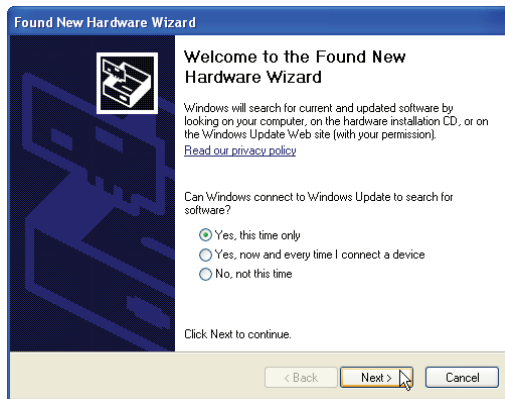


Figure 1-1 Wizard Screen

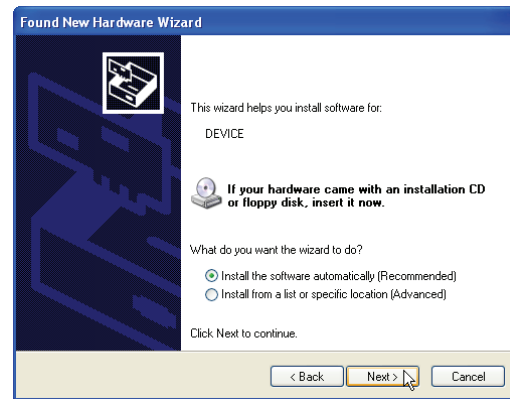


Figure 1-2 Install Automatically

1. In the Welcome to the Found New Hardware Wizard box select “Yes, this time only.” Refer to **Figure 1-1 Wizard Screen**
2. In DEVICE screen select, “Install the software automatically (Recommended.)” Refer to **Figure 1-2 Install Automatically**
3. In the Completing the Found New Hardware Wizard select Finish. Refer to **Figure 1-3 Completing the Found New Hardware Wizard**

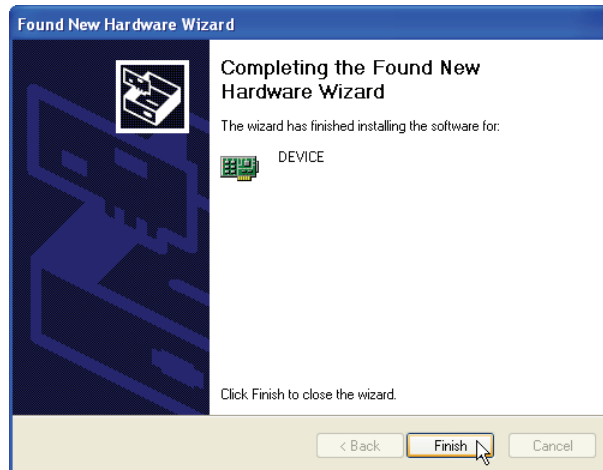


Figure 1-3 Completing the Found New Hardware Wizard

Definitions of the LED

A solid red LED (light) appears when HAWK is connected to the computer. A green LED will come on when video recording has started and a red LED will flash due to incoming audio. The green and red lights will be turned **OFF** when recording has stopped.

Note!

Exiting this program should be done in a normal fashion. Killing power on your computer in the middle of a program running under Windows may cause you problems. If you are stuck, use CTRL-ESC and terminate the program.

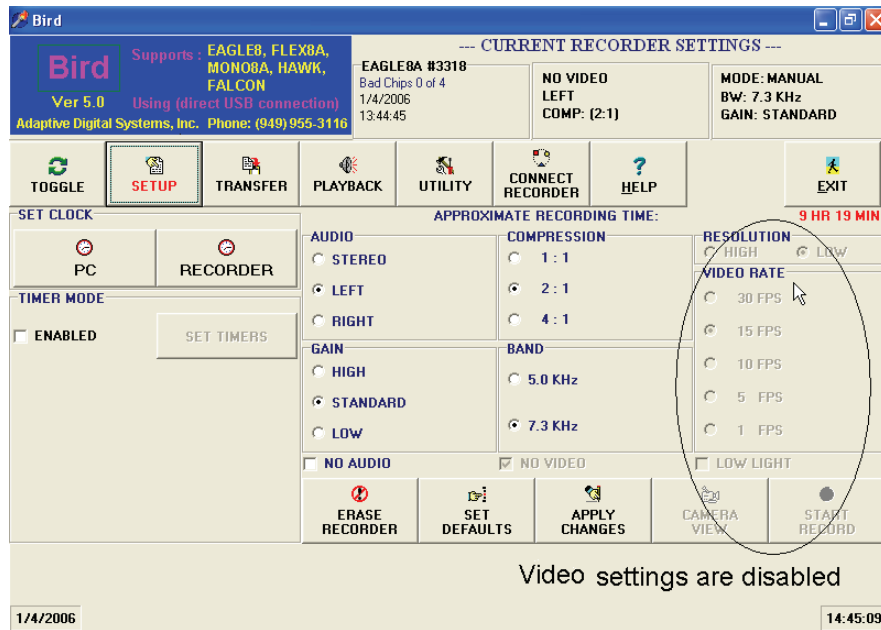


Figure 1-5 Video Settings

FALCON, EAGLE8/A /B /C, MONO8, and FLEX8C use the Hawk software. The video settings are disabled once the audio recorders are connected. Refer to **Figure 1-5 Video Settings**

IMPORTANT REMINDER!!!

Always press the stop button and remove batteries before you attach the RECORDER to the computer. If the RECORDER has not stopped recording properly, the recorder will begin recording again, once it is reconnected to the computer, and receives power.

Power Supply

Most laptops and some desktops will need the external power supply in order for the HAWK to function properly. The USB hub that is provided by ADS, can be used to power the HAWK recorder. You will need the power supply if the Red LED does not appear. All other USB devices such as PDAs, scanners, printers, mouse, keyboard should be connected through the USB hub.

SECTION 2

SETUP

The **SETUP** menu shown in Figure 2-1 appears on startup. The **TOGGLE** button switches between the Bird and USBI program. Selecting Connect recorder will display the appropriate software, which is recorder dependent. We recommend that one recorder be attached at one time.

The top right half of the screen will display the **Current Recorder Settings** of the unit that is attached. You will always need to select **CONNECT RECORDER** in order to read the settings when you attach the recorder. Note the "Bad Chips" 0 of "X" for the HAWK, message. If you have any bad memory chips in the unit please call ADS and make arrangements to have us repair the unit at no cost to you. A RECORDER with some bad chips is still usable, however the record time is reduced proportionately.

The RECORDER **Clock** is set to the same date/time as the PC, hence ensure that the date/time on the PC is correct. The Date/Time on the bottom of the screen is the PC's, while the top of the screen has the RECORDER Date/Time.

NOTE! The DATE format **MM/DD/YYYY** is set from the Windows CONTROL PANEL. Hence if you want European format you can select it from "**GLOBAL**" settings.

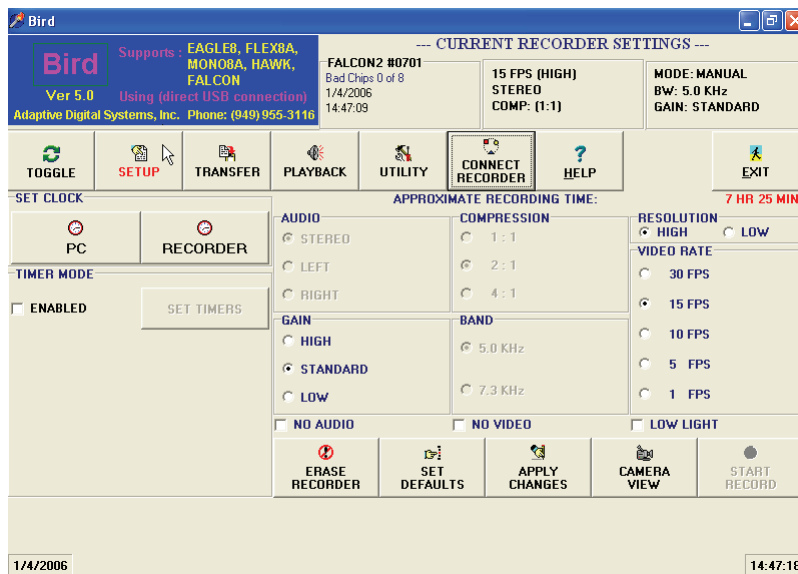


Figure 2-1 SETUP Menu

The **APPROXIMATE RECORDING TIME:** displays the amount of recording time whether you have audio, video, or both. The **HIGH** and **LOW** Resolution are determined by which camera is used. The HAWK automatically recognizes the type of

camera that is connected hence selecting “HIGH or LOW” is only for record time information.

The **Video Rate** sets the frames per second, with the maximum being 30 f/s and the minimum being 1 f/s. Selecting the “TIME LAPSE” option will cause the RECORDER to capture one picture by setting the seconds and minutes.

The **AUDIO** can set the recorder for stereo, left, right or no audio (video RECORDERS only). .

The **COMPRESSION** is used to manage the size and quality of the data. The best audio is 1:1, the 2:1 (the default) is very good, while the 4:1 is good. The video RECORDERS are set to 2:1.

The **CAMERA VIEW** displays the output from the HAWK / FALCON camera in real time, it can be used to focus the camera and give the user an example of what the camera will capture.

The **DEFAULT**, settings would be the most commonly used values for record times. Typically this would be ideal setting for most applications. The HAWK / FALCON default is 15 f/s, of video, 2:1 stereo audio, and standard “GAIN”.

The **Record Time/ Quality, Setup, Bandwidth, and Gain** can all be changed at once. Select "APPLY CHANGES" once the desired settings are selected. Note the changes on top of the screen after you select "APPLY CHANGES".

The **TIME LAPSE** feature allows the selection of the frame on selected seconds. For example, for every 5 seconds a picture will be taken. The conventional method every second captures a certain number of frames.

The **TIMER MODE** can be used to Start/Stop the RECORDER by its internal clock when the *local* or *remote* RCD/OFF is not practical to use. Refer to Figure 2-2 for the Timer Entry Menu. **You can only setup the RECORDERS 1 week ahead of the current date/time.** Make sure memory has been completely erased. To set up the timer:

1. From the SETUP Menu select TIMER Mode **Enabled**, then SET TIMERS. Refer to *Figure 2-2 ENABLED/ SET TIMERS*

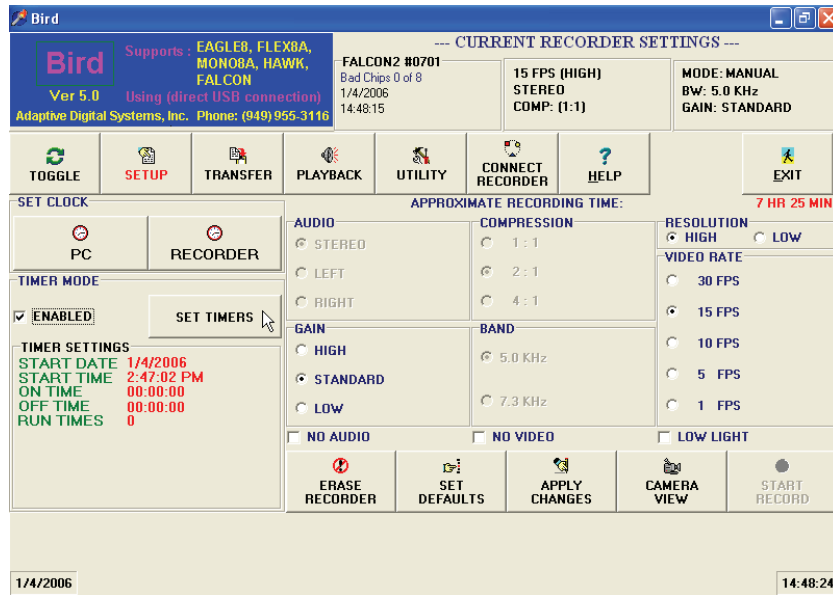


Figure 2-2 ENABLED / SET TIMERS

2. Enter the **Timer Recording Start Date / Time**, note that it is in military (24 Hour) format. The date can only be set one week in advance.
3. Next enter the "ON" Time (RECORD TIME), then the "OFF" Time (IDLE TIME) in hours and minutes
4. Then select the RUN count, the number of times you want the ON/OFF to occur. (1= One Time). If Continuously is checked the RECORD TIME and IDLE time will occur until memory is full.
5. Select "OK" to complete entry. Refer to *Figure 2-3, Timer Mode Entry Menu*
6. ***When you return to the SETUP menu don't forget to "APPLY CHANGES"***
7. Note the "TIMER MODE" indication on top right of the screen

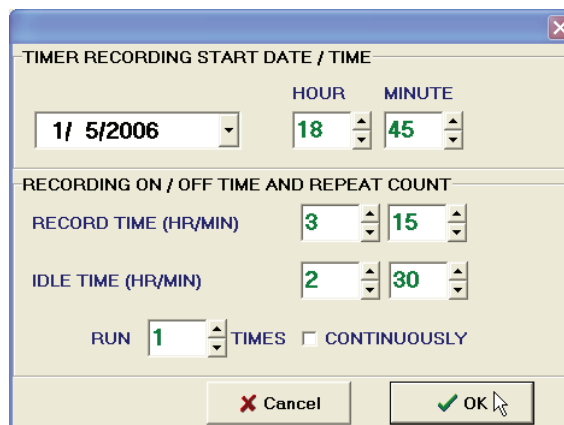


Figure 2-3 TIMER MODE Entry Menu

NOTE!! The unit is automatically reset to MANUAL Mode after data transfer. If you deselect Timer Mode “**ENABLED**” and choose “APPLY CHANGES”, the unit will revert to Manual.

ERASE RECORDER

The RECORDER data memory MUST be erased after each use. The unit will not operate unless you have erased previous recordings, after complete and proper data transfer.

Depending on the unit, i.e., how much memory it has, the erasure may take from 1 to 16 minutes to finish.

SECTION 3

UTILITY

The UTILITY selection is covered next because the user may need to define his computer disk configurations for this program. If you received your computer from ADS this has been set for you. Refer to Figure 3-1 for the UTILITY Menu.

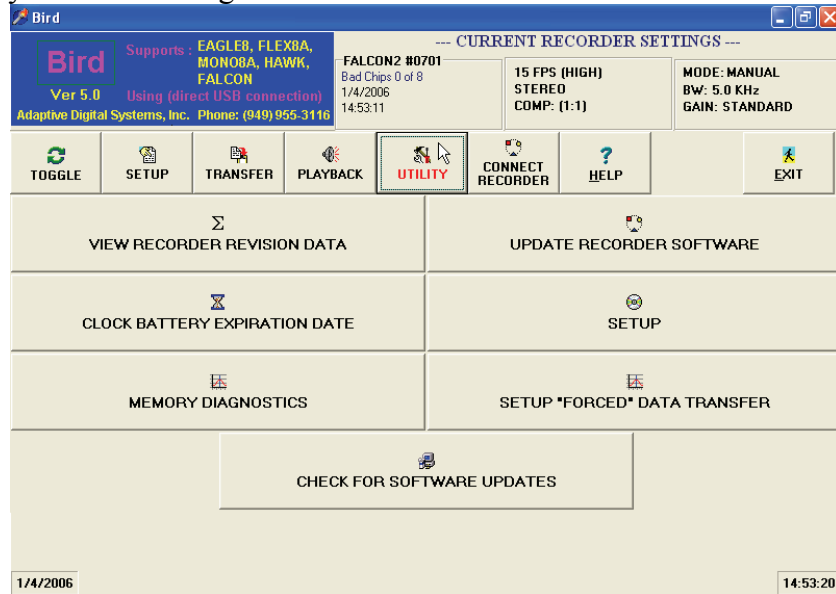


Figure 3-1 UTILITY Menu

This **SETUP DRIVES** option allows you to enter and define the type of disk drives your computer has. Refer to Figure 3-2 for the Drive Menu screen. The "C" drive is assumed to be a hard disk. This program will not allow Formatting any hard disk. New installations you will have to enter your DVD\CD Writer, (DVD\CD Read only), and any MO drives you may have. If you partitioned your hard disk into multiple drives you can define those partitions as well. If you do not know what your system has, you can find it from the Windows Menu under "MY COMPUTER". You can have up to 4 drives added. Refer to **APPENDIX – F SETUP DRIVES** for full drive installation procedure.

For CD-WR (writers) Roxio Direct CD and Drag to Disc are used for FORMAT and EJECT functions. If ADS provided the computer system with the drives already installed you can skip this part. If you are upgrading Roxio you will need to define the UTILITY name/path. Roxio's "Direct CD.exe" is normally stored under C:\Program Files\Adaptec\Easy CD Creator 5\DirectCD. For all of the computers that ADS provided the default path will be automatically set. If you provide your own computer enter the path for the CD Utility. Your normal selections for the path would be **Program Files, Adaptec, Easy CD Creator 5, DirectCD and directcd.exe**. For ROXIO 6 the path is C:\Program Files\Roxio\Easy CD Creator 6\DragtoDisc\DragtoDisc.exe

The **TEMP** button selects the drive where AVI and WAV files are stored. A folder is created and named HAWK_TEMP.

If the drive is a re-writable MO (Magneto Optical) then the program will automatically use the Windows utility, hence you do not need to define one.

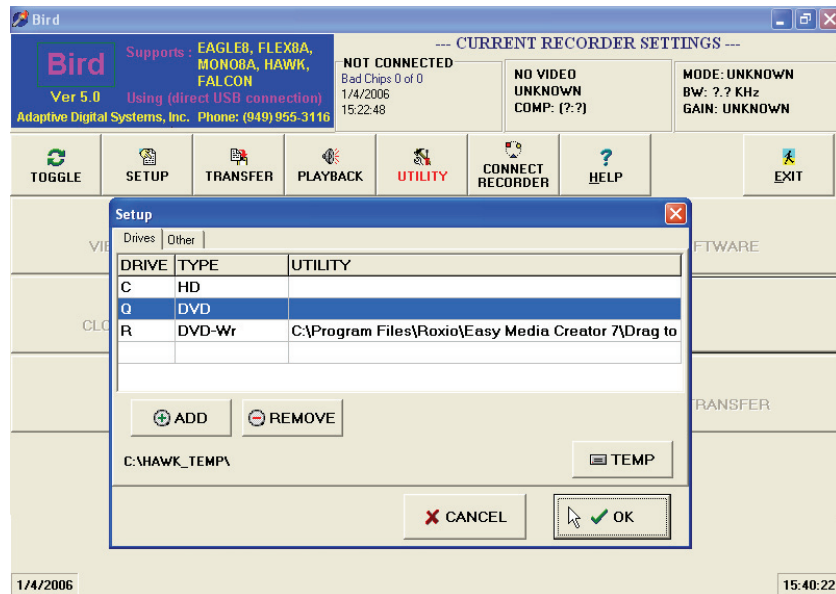


Figure 3-2 Drive Setup Menu

VIEW RECORDER REVISION

This data gives the user the hardware and software revision numbers and dates. Make sure all recorders have the current firmware and hardware.

CLOCK BATTERY EXPIRATION

The user may examine the internal Clock Battery expiration date from this menu. Every two years ADS will change the battery and re-test the recorder at no charge.

UPDATE RECORDER SOFTWARE

This button will load the recorder firmware that is on the hard disk into the recorders. This should be done as soon as possible when a new release is sent. **Note that reloading the firmware does not erase the recorded data and its parameters, hence if you are having trouble with your unit it is safe to reload your firmware. Refer to Appendix-D.**

MEMORY DIAGNOSTIC

The memory test should be run periodically, (about once every 90 days) to identify failed chips. The recorder is still usable with a couple of bad chips however, since ADS will repair any unit at no cost, it is recommended that the recorder be sent back to ADS at your earliest convenience.

SECTION 4

TRANSFER

To transfer the evidence to the archive media follow the steps outlined below:

* Use the USB cable provided by ADS to attach the recorder to the computer.

1. Select **CONNECT RECORDER** to read RECORDER settings and content.
2. Select **TRANSFER** and **SELECT ALL**, note the session information. *Refer to Figure 4-1 Transfer* “SELECT ALL” highlights all sessions.

Information supplied by the RECORDER will be displayed in the white box, indicating good communication between RECORDER and computer. Note the top of the screen identifying the recorder type, serial number and settings.

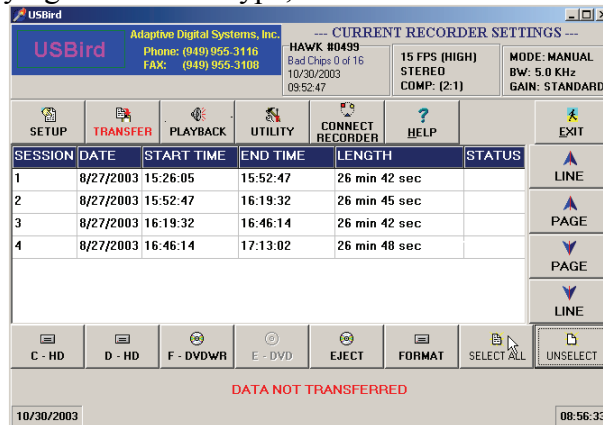


Figure 4-1 Transfer

3. If the destination is the CD or DVD media you must first **FORMAT** the media. Refer to the Format steps using **ROXIO 5** given in the following pages and for **ROXIO 6** refer to **APPENDIX H**. After the media is formatted select the drive the data be archived on. *Refer to Figure 4-2 Select Storage Device*

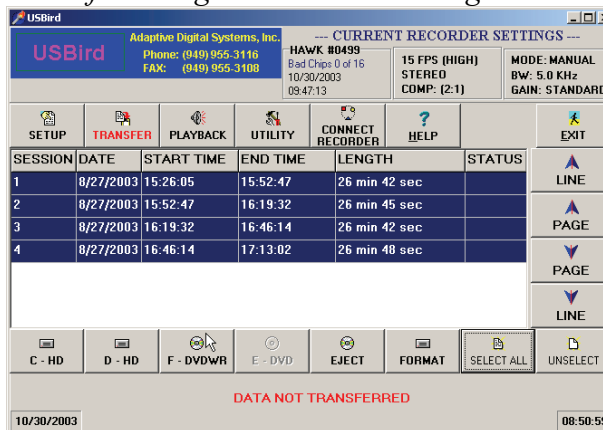


Figure 4-2 Select Storage Device

After the user chooses DVD WR (DVD burner) or CD WR (CD burner) the CD/DVD Select displays the type of media and which sessions will be transferred.

Selecting DVD 1 transfers all the sessions that will fit on the first DVD. The size of one DVD-R is 4.7 Giga bytes. DVD media has to be formatted. *Refer to Figure 4-3 DVD 1*

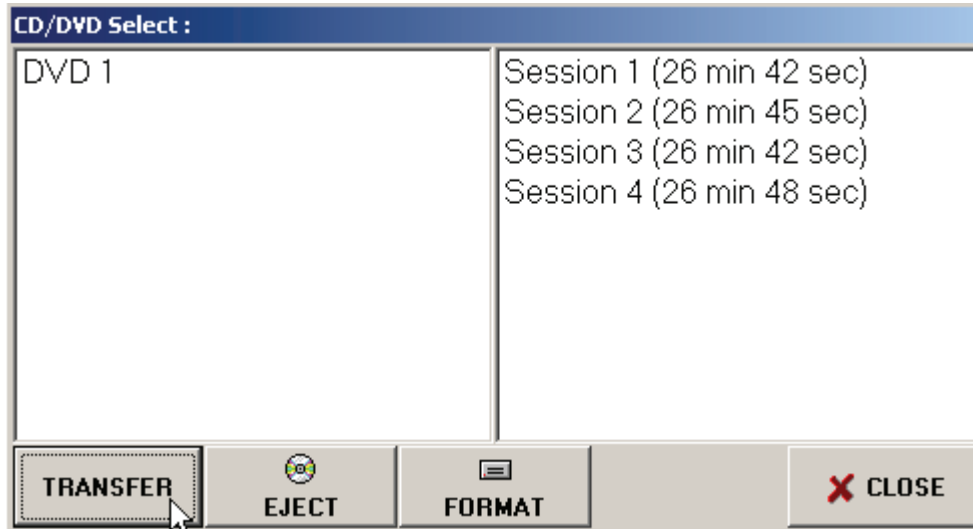


Figure 4-3 “DVD 1”

A full HAWK has 2 GB of recording, transfers on multiple CD-Rs, typically 4. The data size of the HAWK recording will determine the number of CD-Rs created. Figure 4-4 displays that 4 CD-Rs will be needed to transfer all the HAWK data. The example shows selecting CD3 will transfer all the sessions that will fit on the third CD. CD-R media has to be formatted first. *Refer to Figure 4-4 CD3*

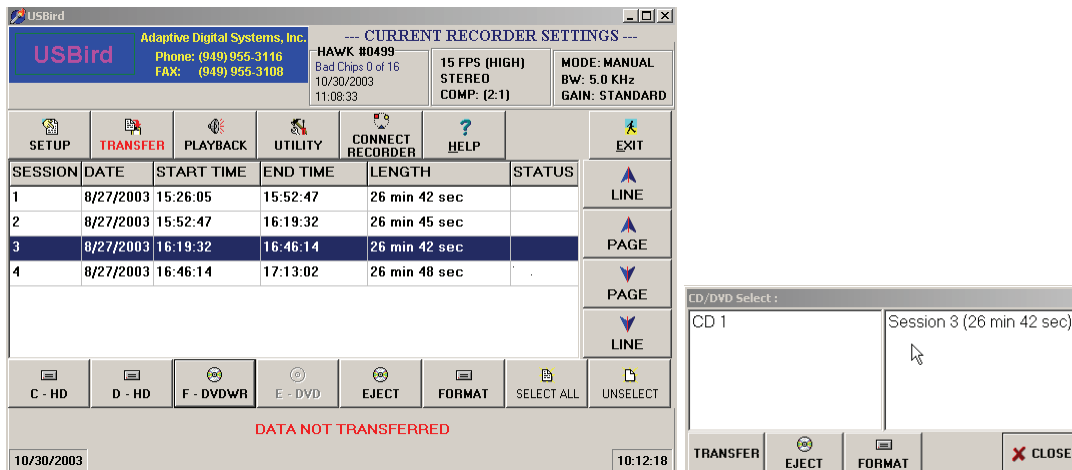


FIGURE 4-4 “CD 3”

4. After the user views their selection in the CD/DVD Select, highlight DVD1 and select **TRANSFER**.

Refer to Figure 4-6 TRANSFER BUTTON

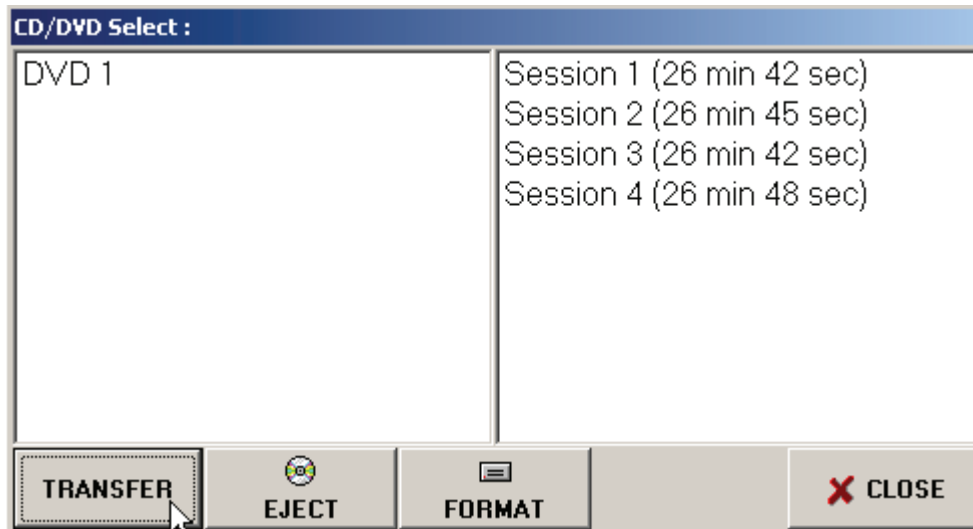


FIGURE 4-6 TRANSFER BUTTON

The keyboard screen allows the user to input information regarding the data.

5. Enter descriptive information and select Enter. *Refer to Figure 4-7 Keyboard*
6. Data transfer begins, when blue bars stop transfer is completed. *Refer to Figure 4-8 Transfer complete*

A screenshot of a software window titled "Keyboard". The window contains four input fields arranged in a 2x2 grid. The top-left field is labeled "FILE NAME" and contains the text "JOHN DOE". The top-right field is labeled "CASE ID" and contains the text "123". The bottom-left field is labeled "OFFICE ID" and contains the text "456". The bottom-right field is labeled "COMMENT" and contains the text "EVIDENCE". To the right of these fields is a "Cancel" button with a red X icon. Below the input fields is a virtual keyboard layout. The first row contains keys for tilde (~), numbers 1-0, underscore/equals, and apostrophe/plus. The second row contains letters Q-P, left and right square brackets, and backslash/underscore. The third row contains letters A-L, semicolon/apostrophe, double quote, and a red arrow key. The fourth row contains "Tab", letters Z-M, less-than/greater-than, question mark/slash, and pipe/ampersand. At the bottom left is a "Shift" button with a green circular arrow icon. At the bottom right is an "Enter" button with a green checkmark icon and a mouse cursor pointing at it.

Figure 4-7 Keyboard

The TRANSFERRING DONE displays when data transfer has completed. Select the **CLOSE** from CD/DVD Select button to go back to the USBird. Refer to Figure 4-8 Transfer Done

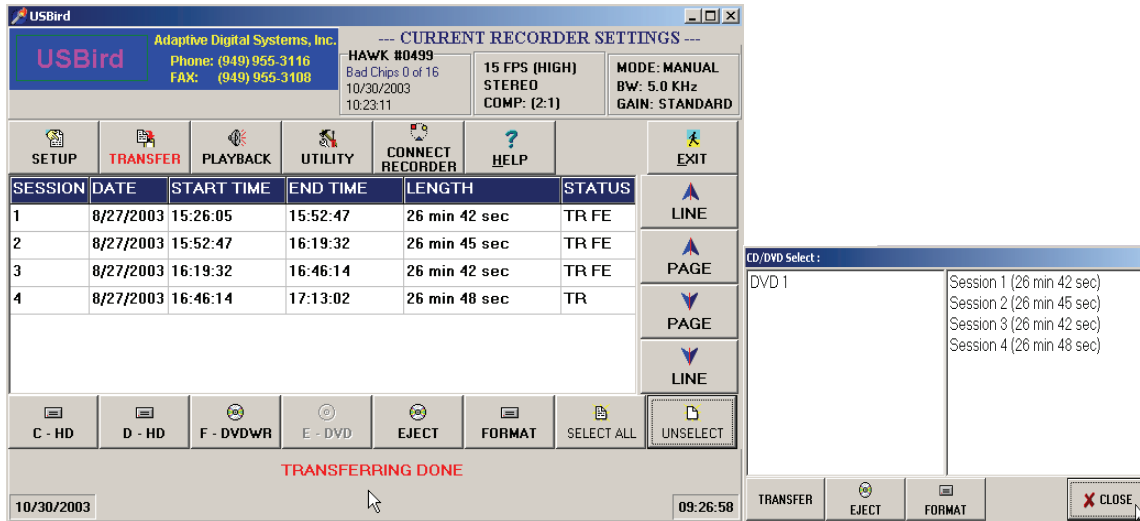


Figure 4-8 Transfer Done

Definitions of the Status Abbreviations

On the Transfer and Playback screens the **STATUS** of each session will be displayed. Each abbreviation **TR**, **FE**, **LB**, and **PF** have their own definition. Refer to Figure 4-9 STATUS

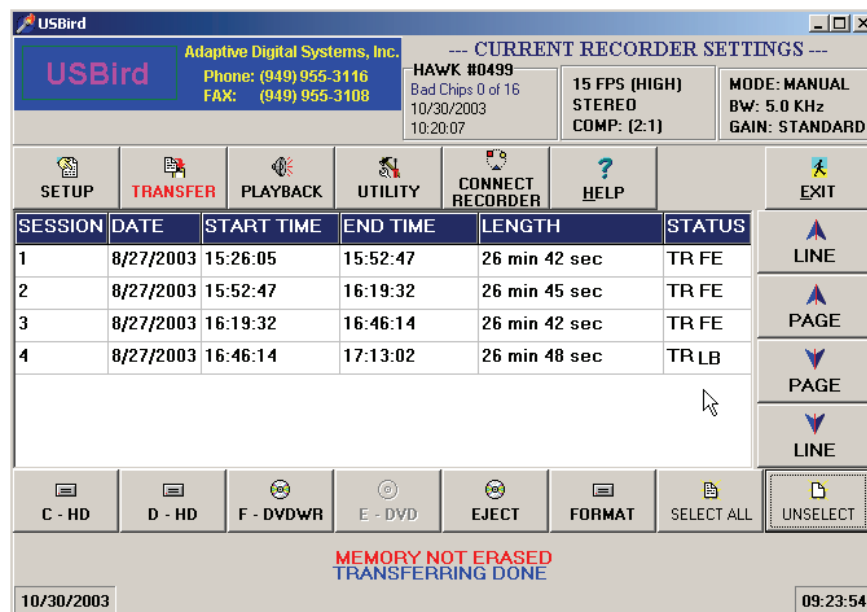


Figure 4-9 STATUS

TR = Transferred session complete

The chosen session has transferred properly.

FE = Forced Ending

The session closed in order to fit on one CD MEDIA. One Forced Ending fills one CD-R. You can select all of the sessions between 2 FE tagged files to transfer to 1 CD. One DVD-R will hold 8 Forced Endings, or 2 HAWK memory cards.

LB = Low Battery

The session stopped because battery power was low.

PF = Power Failure

Power to the recorder is interrupted. For example, removal of batteries without pressing the stop button will cause a **PF** in the **STATUS** window.

NOTE!

**YOU SHOULD NOT USE SPECIAL CHARACTERS IN THE FILE NAME.
NO SPACES ARE ALLOWED.**

To FORMAT CD/ DVD media:

WARNING!!!

For EVIDENCE you should use a "GOLD" CD/ DVD because cheap media may loose data over time. We recommend "MITSUI GOLD".

***Directions for Roxio 5.1, you may have earlier version of Direct CD or a New Version. A description of Roxio 6 is provided in the appendix.**

1. Select blue FORMAT button
2. Select drive, DVD/CD-Writer or MO will be your choices
3. At the "format utility" screen select "format CD" *Refer to figure 4-10 Direct CD Format Utility Screen*

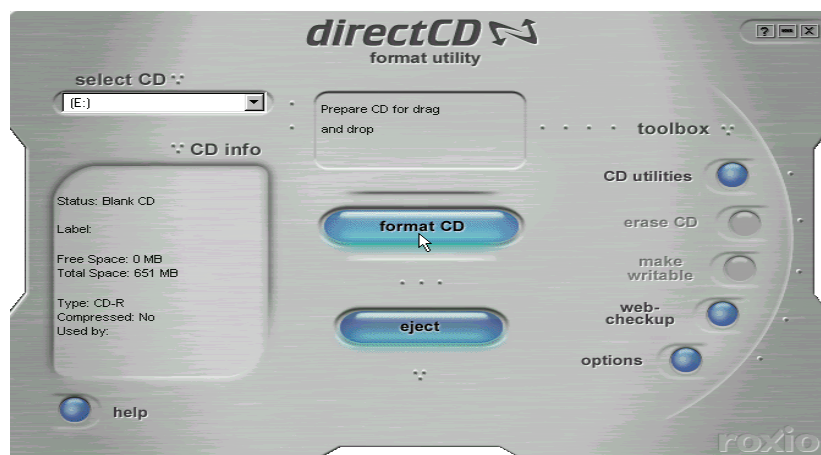


Figure 4-10 Direct CD Format Utility Screen

4. Name the CD in the "Label:" box, the VOLUME information is optional, much like a floppy, you are simply giving a name to the CD media *Refer to Figure 4-11 Label CD*

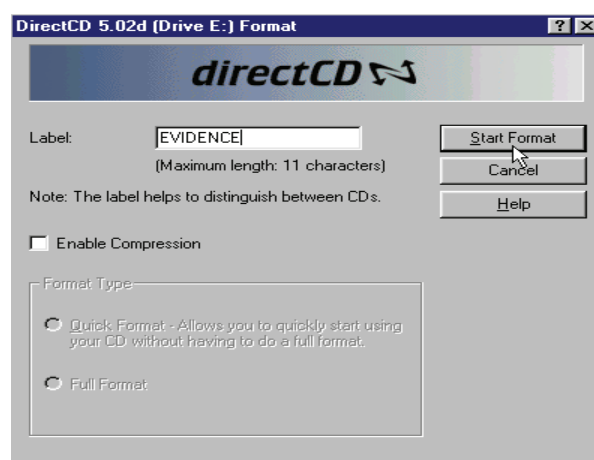


Figure 4-11 Label CD

5. Select "Start format", CD format begins
6. At the "DIRECT CD READY" message select "OK"

To Eject a CD-Writable media after it has been used:

1. Select EJECT
2. At the "format utility" message select "eject"
3. At the "EJECT CD" message for "**EVIDENCE**" CDs select *the bottom option "Close to Read on Any Computer", when you want to archive the data, also select the square to "Protect CD" then select OK. Note Figure 4-12 below.*

If you wish to use the media again, that is to add to it as you would for work copy select the top paragraph. With this selection you **will not** be able to play the CD in a standard CD player, however you will be able to play it in a CD writer.

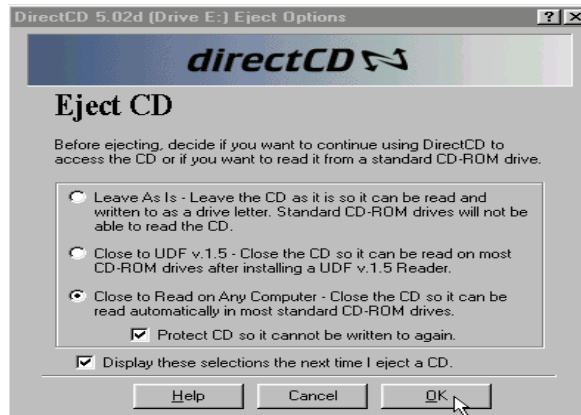


Figure 4-12 Eject Evidence CD Selection

SECTION 5

PLAYBACK

In order to initiate playing video / audio perform the steps outlined below:

1. Select **PLAYBACK** button on the top row to start the process.
2. Select the “Source” drive, C, D, E etc
3. Select File and Session(s) you desire to listen and watch to
4. Select Play button. **Refer to Figure 5-1, Press PLAY**

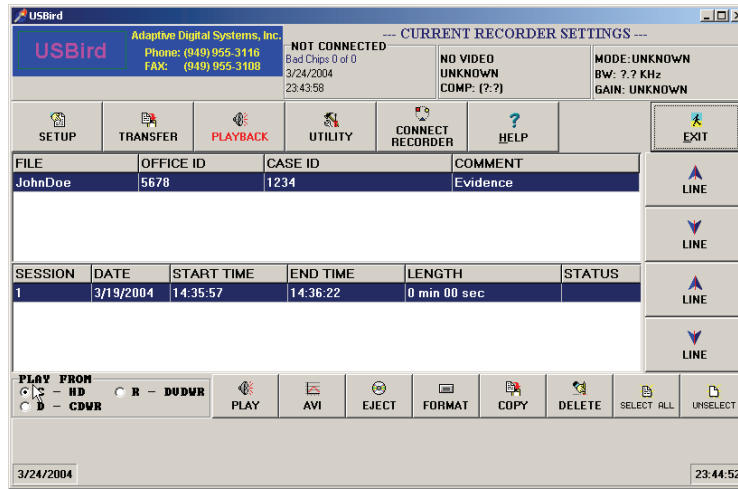


Figure 5-1 Press PLAY

Once you choose the file, it will be converted to MJPEG and played through the USBirdPlayer. The recording will not be copied to the Hard disk, unless you make an AVI file. Windows media Player will play the AVI file. Refer to **Figure 5-2 “USBirdPlayer” Menu**

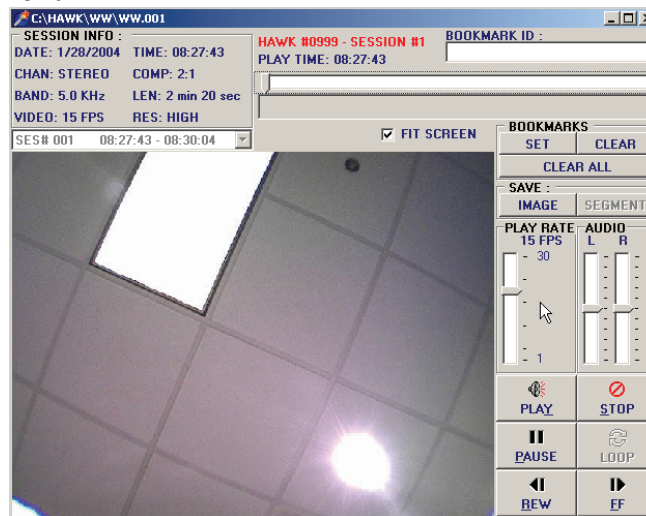


Figure 5-2 “USBirdPlayer” Menu

Most of the controls are obvious, **Windows Media Player Menu**. To play from any time, just place the mouse on the “white box” on the time bar and hold the left mouse button down. Drag the arrow to when you want to play and release the mouse button start playing.

Play rates can be adjusted, for example if a recording was captured a 1 frame per second you can playback the recording at 30 frame per second for a faster playback. Go to the **PLAY RATE** meter and move the bar. **Refer to Figure 5-4 PLAY RATE**

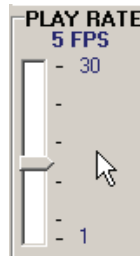


Figure 5-4 PLAY RATE

The **PLAYBACK** window can be formatted to fit the entire screen. This is used when the recording is made into an analog copy such as VHS tape. Right click on the **PLAYBACK** screen and select **FULL SCREEN**. **Refer to Figure 5-5 FULL SCREEN**

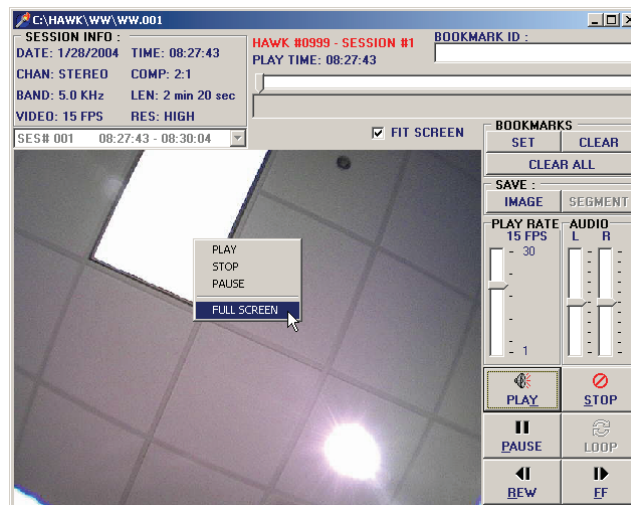


Figure 5-5 FULL SCREEN

Audio analog can be made from the USBird recording. First attach an audio tape recording device to the sound card. Use the audio output of the sound card, usually the green connector. At the **PLAYBACK** screen check the box labeled **ANALOG COPY**. The **Select** screen appears. The select screen allows the user to choose an audiotape length. After you choose the **TAPE LENGTH** the audio will play. You should hit the record button on the audiotape device. **Refer to Figure 5-6 ANALOG COPY**

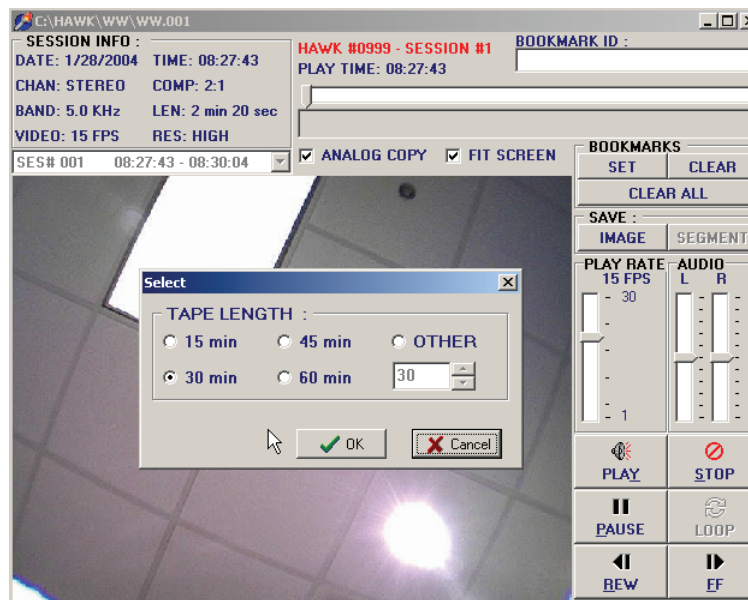


Figure 5-6 ANALOG COPY

The **AVI/WAV** button converts the HAWK file to a standard AVI or WAV format that can be played by any media player. The **AVI** button does not display the video file once it has been converted. The AVI/WAV files are stored where the HAWK_Temp folder is initialized in the **UTILITY** screen under **SETUP DRIVES**. **Refer to Figure 5-7 AVI/WAV Menu**

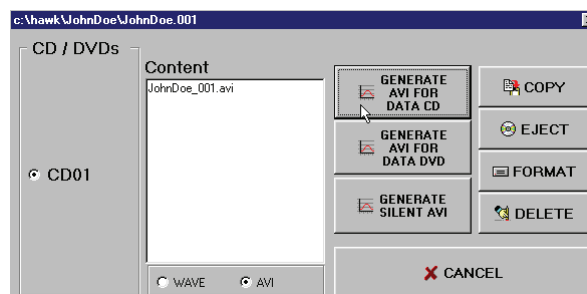


Figure 5-7 AVI/WAV Menu

SECTION - 6

HAWK / FALCON EAGLE8/A RECORDERS

The HAWK line of recorders can perform both video and or audio recording. The record time is 30 f/s=1.7 HR; 15F/S=3 HR; 5 f/s=8 HR; 1 F/S=17 HR. HAWK memory expansion cards (up to a total of 8) can be added to the HAWK for longer-term recordings. Each HAWK memory card adds 3 hours of low resolution recording at 15 f/s.

The HAWK2 has 4 Gigabytes of memory while the HAWK4 has 8 Gigabytes. The recorder lengths double and quadruple depending on which recorder you have. **Refer to Figure 6-1 for a picture of the HAWK.**

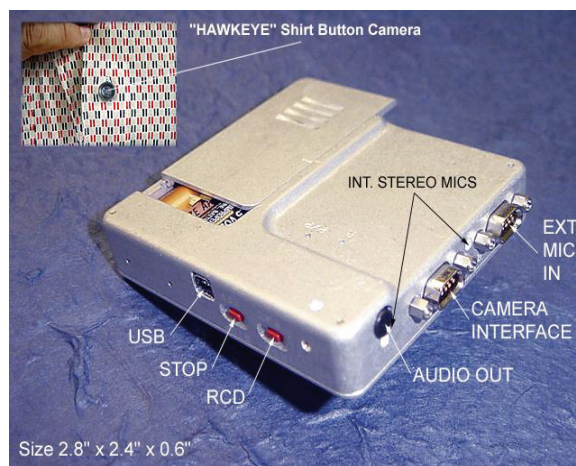


Figure 6-1 The HAWK

The EAGLE 8/A is an audio recording device. It has the same button functions as the HAWK recorder except the EAGLE does not have video capturing ability. New versions of the EAGLE 8/A recorder include the B and C. The only difference is the memory size. For example, the stereo record times at 2:1 compression are: EAGLE8A = 6.7 hours, EAGLE8B = 13.4 hours, and EAGLE8C = 26.8 hours.



Figure 6-2 The EAGLE 8/A

The FALCON is the next generation audio / video recording device. The FALCON is a slimmer version of the HAWK with more memory. The advantages of the FALCON are you can remove the recorder from the aluminum shell in order to place the recorder in objects where size makes a difference. The FALCON memory is 4 Gigabytes, which gives you a 2 hour recording at 30 fps at high resolution. The FALCON uses a rechargeable lithium battery. The lithium battery will give you approximately 4 hours of battery life.

Another difference between the HAWK and FALCON is the removal of several components from the HAWK such as the audio connector and the record and stop buttons. The FALCON uses the black slide switch to initiate the recording. The mini USB port on the FALCON is different from the HAWK. **Refer to Figure 6-3 for a picture of the FALCON**



Figure 6-3 for a picture of the FALCON

BATTERY Installation

The HAWK uses two 1.5 v, "AA" batteries for operation. The batteries are installed series providing 3 volts. **Please note the label in the bottom of the unit for proper battery installation.**

Two "AA" Alkaline batteries will last for 3.5 – 4 hours, while two "AA" Photo Lithium cells will last for 7.5 - 8 hours. **You should not mix battery technology.** The HAWK uses about 315 mA at 3 volts while it is recording, and about 1 ma of power while it is waiting, hence do not install the batteries a long time ahead of its use. If the situation calls for it, you can insert the batteries a couple of days ahead and still get the full recording.

NOTE!!

You should always use fresh batteries for each new operation. Used batteries may leak, hence do not leave batteries in the RECORDERS.

LED

The recorder has dual LEDs which turn red or green. The LED indicates an operation. The RECORD "LED" in the front, near the RCD switch, is used the same as the older FBIRD recorders. When the unit is turned "ON" the RECORD LED will turn solid "red" indicating that it recognized the switch. When the camera is connected, in 2 seconds the LED will turn solid "green" indicating that the camera is ready and the record process has started.

Note!!

If the GREEN and RED LEDs do not show proper operation turn the HAWK "OFF" for 5 seconds then "RCD" again.

Only during audio and no video recording the red LED will follow and trace the loudest audio from the left microphone.

The LED will flash repeatedly 3 times when the recorder memory is full. If the battery is low then the LED will flash ON and OFF **slowly**.

NOTE!

If the low battery indicator is flashing, turn the unit "OFF" replace the cells and then you can turn the unit ON or "RCD" again.

The computer will display the fact that the "last recording" was stopped short because of a low battery condition.

The green "LED", further back, will be ON when the unit is in playback. In later software releases the LED will follow the playback audio levels.

CAMERA

The HAWK has a variety of camera options. You can have a black and white or color camera. The image sizes are (LOW resolution) 352 X 288 and (HIGH resolution) 640 X 480 pixels. The VGA camera can operate both HIGH (640 X 480) and LOW (352 X 288) RESOLUTION MODE. The selection can be made from "SETUP."

Once the camera is connected and the unit is turned ON, the HAWK will automatically detect and recognize which camera is used and adjusts the parameters accordingly. Refer to Figure 6-2 HAWK with HAWKEYE (shirt button), HCCAM (pinhole) and the adjustable lens cameras.

NOTE!

If no camera is found the LED will not turn "GREEN", hence you should turn the unit "off" wait 5 seconds and try again. The HAWK will record "audio" if the camera does not operate.

CAMERA DEFINITIONS

At the end of each camera connector there is a stripe that distinguishes the color and type of the camera.

CAMERA	CAMERA RESOLUTION	COLOR	STRIPE
CIF	LOW RESOLUTION	B/W	NONE
CIF	LOW RESOLUTION	COLOR	RED
VGA	HIGH RESOLUTION	B/W	YELLOW
VGA	HIGH RESOLUTION	COLOR	YELLOW/RED

MICROPHONE

The HAWK/EAGLE8 and FALCON can use its stereo internal or external microphones. If the external is plugged in it is automatically selected for use. The Left and Right microphone position is engraved on the chassis. The internal microphone is factory set for 6 dB more sensitivity, over the external microphone.

USB PORT

The HAWK USB port uses a special USB cable that connects the HAWK to the computer's USB port. The HAWK communicates with the computer via USB.

HEADSET

The 1/8-inch stereo headset plug is used for playback. This output is intended for use with headsets or powered speakers. The output is disabled during recording. If at all possible this output should be used to playback the preamble.

CONTROL SWITCHES

The HAWK/EAGLE8 has the RCD/FWD and STOP/OFF momentary switches on the side and the PLAY/PAUSE {P/P} as well as the REW, {R} on the bottom. Refer to **Figure 6-4 Hawk with button Descriptions** or **Figure 6-5 EAGLE8/A**.

RECORDING

For recording only the "RCD" and "STOP" are active. **NOTE "PAUSE" is not active during recording.** If the remote record switch is attached to the unit it must be used for ON/OFF control. For special applications, ADS also makes a set of external microphones without the external ON/OFF switch.

NOTE!

*To ensure proper operation,
make sure you depress all switches for about 1 second.*

RCD

The "RCD" switch causes the HAWK to go into the record mode. The LED turns red, then green within 2 seconds to indicate that the camera is attached. When LED will flash "red" following your voice while the unit is recording.

NOTE!

The user should make a short "preamble" recording to check that everything is attached and working properly.

NOTE!

If you are in PLAY mode, you must turn the unit "OFF" before you can enter the RECORD mode. During PLAY the RCD switch acts as the "FWD".

STOP

The "STOP" switch halts recording, and puts the unit in a low power state. The RECORDER logs the ON / OFF date/time as "Session" information.

PLAYBACK

The playback function uses all 4 switches. NOTE that you must be in the OFF state to re-enter the record mode. The REW and FWD switches have different meaning when in PLAY or PAUSE. Note that "playback" does not erase any data. Once you are finished with local "playback", you may continue recording from where you left off by first turning the RECORDER "off" then pressing RCD.

PLAY / PAUSE

NOTE!

The Play / PAUSE (P/P) as well as the REW(R) controls on the HAWK unit is on the bottom. Use a paper clip to operate and hold down button until recording plays (3-5 seconds).

The "PLAY" button causes the unit to power up, turn the green LED 'ON' and start playing from the beginning Session 1. Depressing this switch while the unit is playing will cause it to PAUSE and flash the green LED. To continue playing you must depress this switch again.

REW

Depressing this switch while the audio is playing causes a 3-minute jump back. Depressing it while you are in PAUSE causes the RECORDER to begin playing from the beginning of the current Session. To jump back **into** the previous session you should hit REW from the PAUSE state, and then hit REW again to take you back into the previous session.

FWD

Depressing the "FWD" switch causes the audio to jump ahead 3 minutes. If you are in the PAUSE state, depressing this switch will jump you into the beginning of the next Session.

OFF

Depressing this button will cause the recorder to be powered OFF. This must be done to re-enter the RECORD mode.

RECORDING LENGTH

Type of camera and frames per second determines the recording length. The chart below displays HAWK recording duration. The settings are stereo with 2:1 compression. Times are given for each session and full recorder length.

	One Forced Session	One Forced Session	Full Recording Length	
	CIF (LOW)	VGA (HIGH)	CIF (LOW)	VGA (HIGH)
30 f/s	22 minutes	14 minutes	88 minutes	56 minutes
15 f/s	42 minutes	27 minutes	168 minutes	108 minutes
10 f/s	60 minutes	40 minutes	240 minutes	160 minutes
5 f/s	105 minutes	73 minutes	420 minutes	292 minutes
1 f/s	258 minutes	212 minutes	1032 minutes	848 minutes

RECORDING TIME AND BATTERY LIFE WITH VGA CAMERA AND AUDIO ON

Battery	1 f/s	5 f/s	10 f/s	15 f/s	30 f/s
	851 min	293 min	161 min	111 min	58 min
Duracell	151 min LB	138 min LB	124 min LB	Memory Full	Memory Full
Energizer	458 min LB	Memory Full	Memory Full	Memory Full	Memory Full

The EAGLE8/A has 420 minutes of recording time on 1 "AAA" battery and 18 hours on 2 "AAA" batteries.

TRANSMITTERS

Do not slide the XMT switch if antenna is not presently connected to the EAGLE/8 or HAWK recorder. Refer to Figure 6-6 Eagle8/Transmitter

In order to begin transmitting, press record button, then turn on the XMT switch. To remove antenna, XMT switch should be in the off position first. XMT switch should always be in the off position when not transmitting or in use.



Figure 6-4 HAWK with button descriptions

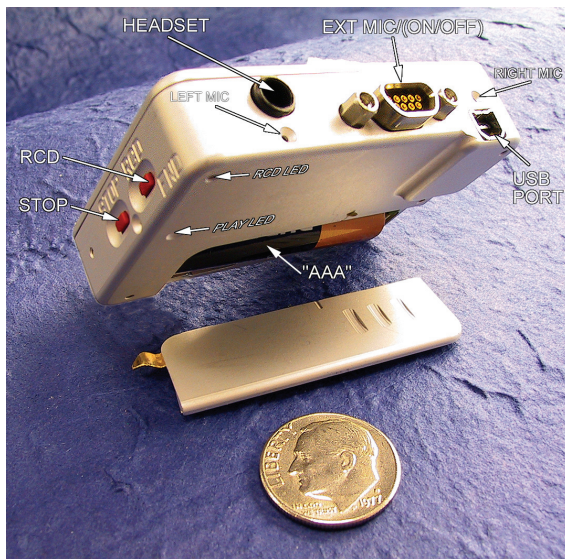


Figure 6-5 EAGLE8/ A with button descriptions



Figure 6-6 EAGLE8/Transmitter

SECTION 7

"MONO8" RECORDER

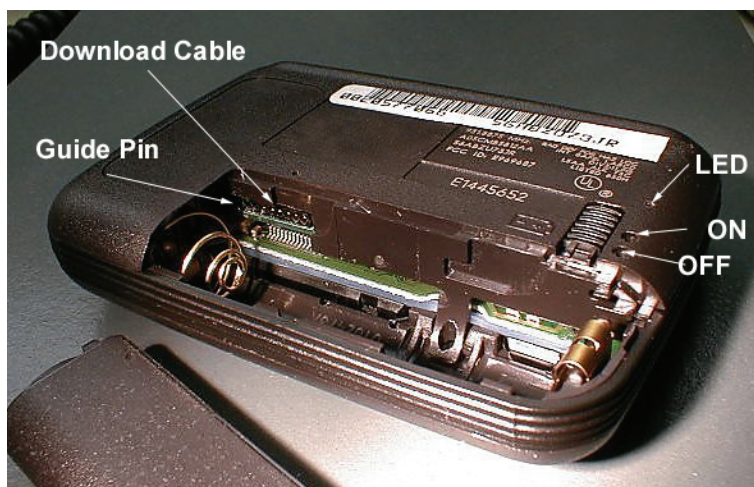


Figure 7-1 MONO8

The MONO8 audio recorder captures stereo audio for 10 hours or mono for 20 hours. Note that the pager is fully functional with the exception of the vibrator function. The MONO8 has an Officer Safety Transmitter (OSRFT) option which transmits the audio continuously for up to 6 + hours while recording with the "L91" Lithium battery. When the MONO8 is not transmitting, an ordinary Alkaline "AA" will last for 10+ hours. The MONO8 uses the USB port of the PC for data archive making it a very transportable unit. Refer to **Figure 7-1 MONO8**

The MONO8A is the latest model it has more memory and records 13 stereo hours.

BATTERY

NOTE, a battery should be left in the unit while on the shelf to keep the pager function settings. This should not be confused with the recorder settings, which are kept even without a battery. A fresh battery must be installed on every new recording.

DOWNLOAD CABLE / GUIDE PIN

The Download / Control cable plugs in just to the inside of the coil spring. The "key" Guide Pin is towards the outside (short) end. Please be gentle, and insert and pull the cable straight out.

RCD

The "ON" and "OFF" switches are momentary, and should be held for about 1/2 second. Note the red LED will follow the audio. **NOTE, please do not exert excessive force when depressing the switch.**

SECTION 8

FLEX8C

The **FLEX8C** is our most covert recorder. The solid state electronics built on an ultra-thin form factor assures inconspicuous evidence recording in highly transportable packages. Data is transferred to any PC via a Universal Serial Bus (USB). Standard audio hardware commonly found on most PCs may be used for data playback. User software running under Windows 98/2000/XP® will cut CD media for archive, and can also create audio CDs which can be played on any CD player. Due to more dense memory boards we are able to create recorders with longer record times such as the FLEX8C2/ D / E. Refer to **Figure 8-1 FLEX8C**

System features:

- Local Record START/STOP
- Playback via Standard Audio Cards
- Programmable Timer ON/OFF
- 10 Hrs Stereo / 20 Hrs Mono Record
- Local Microphone Inputs
- Interface to USB Port
- 1:1, 2:1, 4:1 record compression
- Optional "Officer Safety" Transmitter
- Measures 1.75" x 0.9" x 0.18"
- Uses flat rechargeable Lithium cells

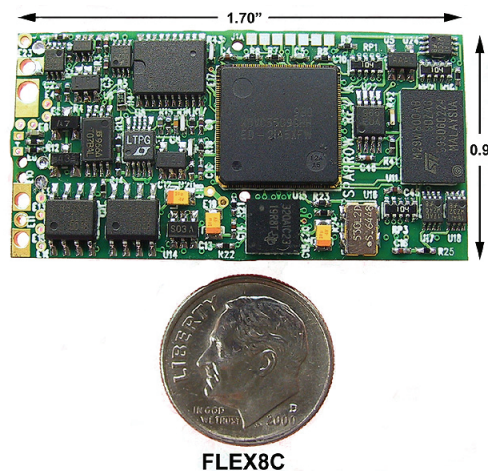


Figure H-1 FLEX8C

SECTION 9

USBirdPLAYER Program

The “USBirdPLAYER” is similar to our FBPLAYER used on the earlier EAGLE 2 and 4 line. The USBirdPLAYER plays audio and video files from the recorders, the USBirdPLAYER code resides on all evidence CDs inside the HAWK directory. The USBirdPLAYER can execute on any PC and uses the PC’s Sound Blaster for audio output. To run USBirdPLAYER simply double click on the ICON. If you are playing back video, be sure to install the MJPEG codec. The MJPEG codec is located in the CODEC folder in the evidence CD. The main menu is shown in Figure 7-1.

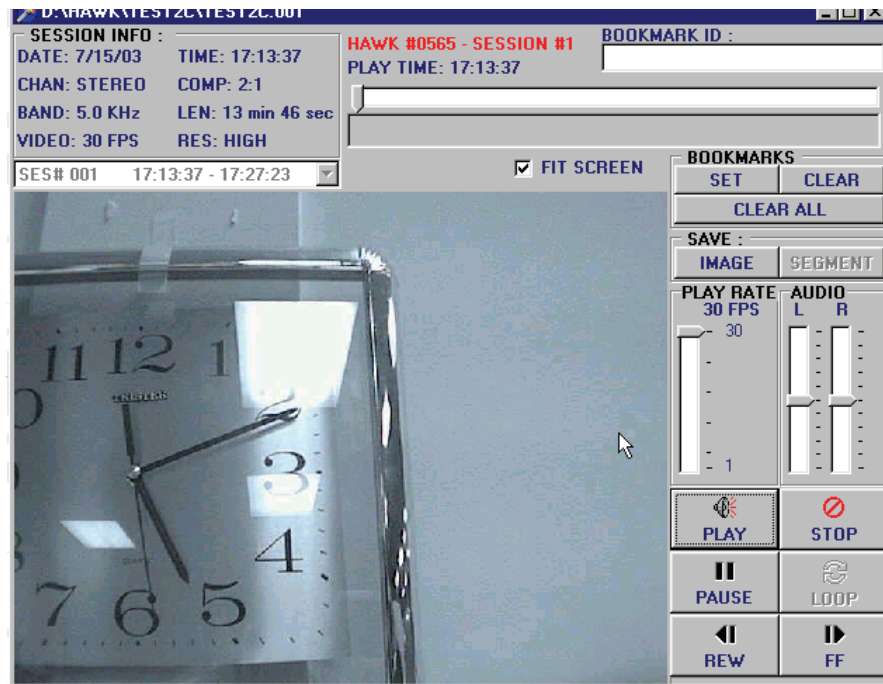


Figure 7-1 USBirdPLAYER Main Menu

The user can select which drive to play back from. Once the drive is selected the files appear on the screen, as shown above. After you select a file the Sessions information appears on the screen.

Select the Sessions you wish to hear and choose PLAY, COPY, or DELETE. **Note that you can’t delete from the CD.** Once the file is selected the screen shown on Figure 7-2 will appear. From here the user can automatically make .WAV or .AVI files. ***Note that one CD will typically hold about 1 hour of recording from a HAWK.***

USBirdPLAYER MAIN MENU BUTTONS

The volume can be adjusted by the AUDIO L and R channel scroll bars.

The **PLAY** button begins audio and video playback.

The **PAUSE** button stops the playback, selecting the **PLAY** button resumes play back.

The **REW** button plays the video recording back 1 frame.

The **FF** button plays the video recording forward 1 frame.

CREATE A JPEG

A JPEG is a compressed image taken from the video recording.

1. Select the image by using the scroll bar or **REW** and **FF** buttons.
2. Next select the **PAUSE** button.
3. Select the **JPEG** button.
4. The user will input a name for JPEG.

CREATE A SEGMENT

The user can select a portion of the recording. For example, you may have a 4 hour recording, in that recording you may only need 2 minutes. The portion of the recording is a segment. The segment is separated into its own individual session .

1. Select the segment by using the scroll bar.
2. Use the **SET** button to mark the start and end of the segment.
3. Select the **SEGMENT** button.

The **CLEAR** button removes the bookmarks from the scroll bar.

The **CLEAR ALL** button removes **all** the bookmarks from the scroll bar

HOW TO CREATE AN AVI

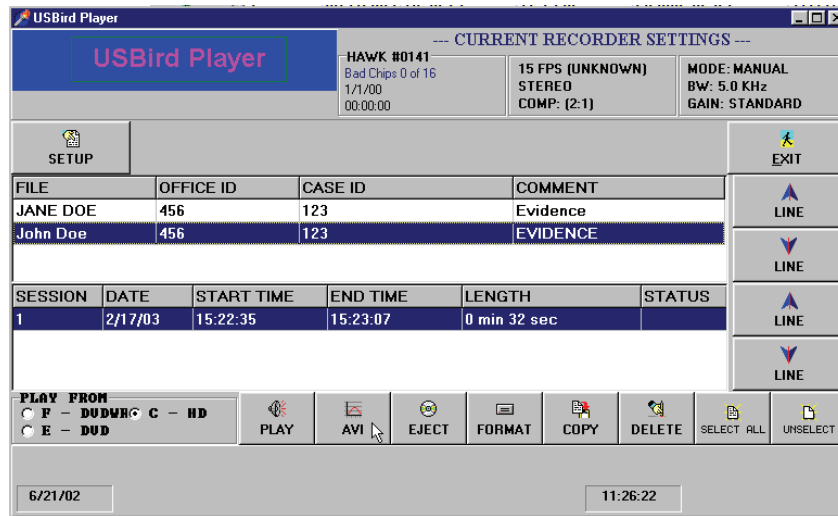


Figure 7-2 AVI File Menu

Make “.AVI” Files

1. Select AVI button, and wait until PC makes .AVI files and writes them to a Hawk_Temp Folder. The user chooses where the Hawk_Temp Folder is stored. *Refer to Figure 7-3 AVI Conversion SCREEN*
2. Choose in the GENERATE AVI FOR DATA CD. This selection will slice the recording in order to fit on CDs. The number of CD's needed depends on the length of the recording.
3. Insert blank CD in CD/DVD-RW and select FORMAT. Format the CD.
4. Select COPY AVI file from Hawk_Temp and paste to CD.
5. Select EJECT and close out the CD

GENERATE AVI FOR DATA DVD creates AVIs that will be stored on DVD media.
 GENERATE SILENT AVI will create a file with video and no audio.

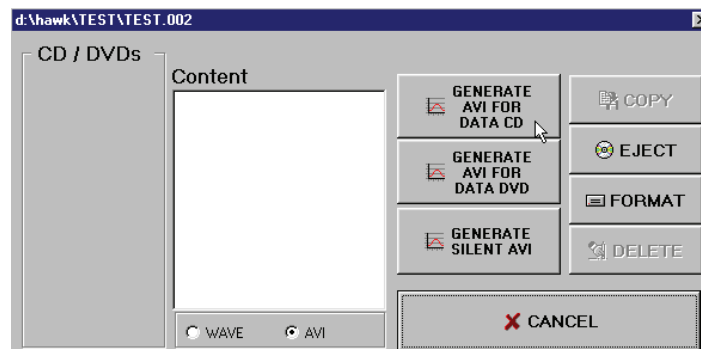


Figure 7-3 AVI Conversion SCREEN

HOW TO CREATE WAV FILE

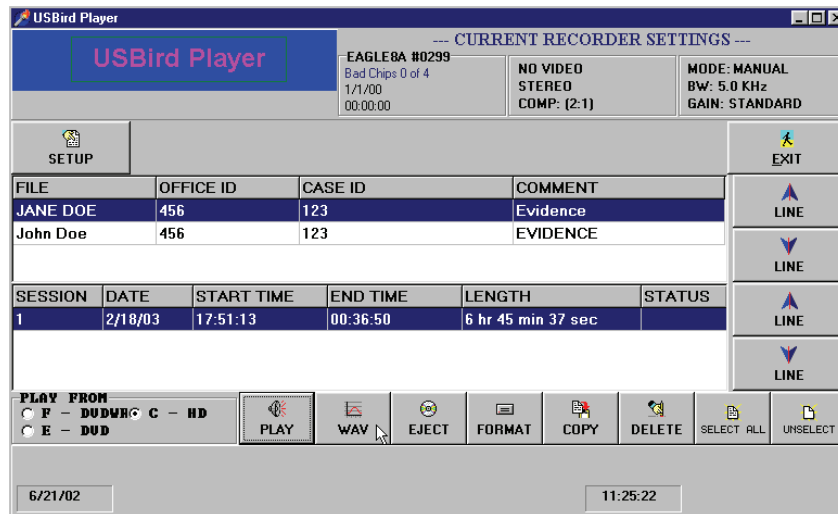


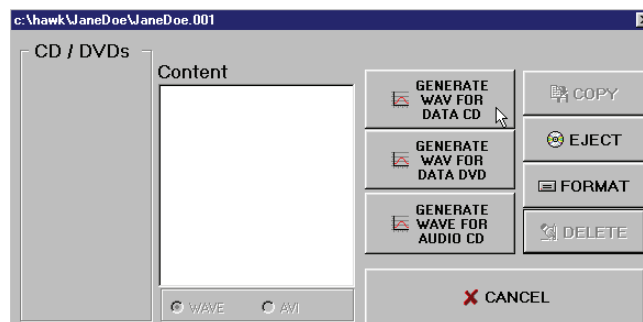
Figure 7-4 WAV File Menu

Make “.WAV” Files

6. Select WAV button, and wait until PC makes WAV files and writes them to a Hawk_Temp Folder. The user chooses where the Hawk_Temp Folder is stored. *Refer to Figure 7-5 AVI Conversion SCREEN*
7. Choose GENERATE WAV FOR Audio CD, this will slice the recording to fit on CD media. The number of CDs are determined by the length of the recording. A CD can hold about 70 minutes of audio recording.
8. Insert blank CD in CD/DVD-RW and select FORMAT. Format the CD.
9. Select COPY WAV file from Hawk_Temp and paste to CD.
10. Select EJECT and close out the CD

GENERATE WAVE FOR DATA CD will create a wav file.

GENERATE WAVE FOR DATA DVD will create a recording to fit on DVD media.



Refer to Figure 7-5 WAV Conversion SCREEN

APPENDIX - A

USBird SOFTWARE INSTALLATION

To install/update the resident code from CD.

1. Go to My Computer and go to USBird CD.
2. Go to Installation CD and select 'BIRD.exe'.
4. In the Welcome screen, select next.
5. In the Choose destination location, select next.
6. In the Select Program Folder, select next. Start Copying files begins.
7. Drag out Bird shortcut to Desktop.
8. **Check the box, “Yes, Launch the program first” and select next in the Setup Complete screen. Refer to Figure A-1 Setup Complete**

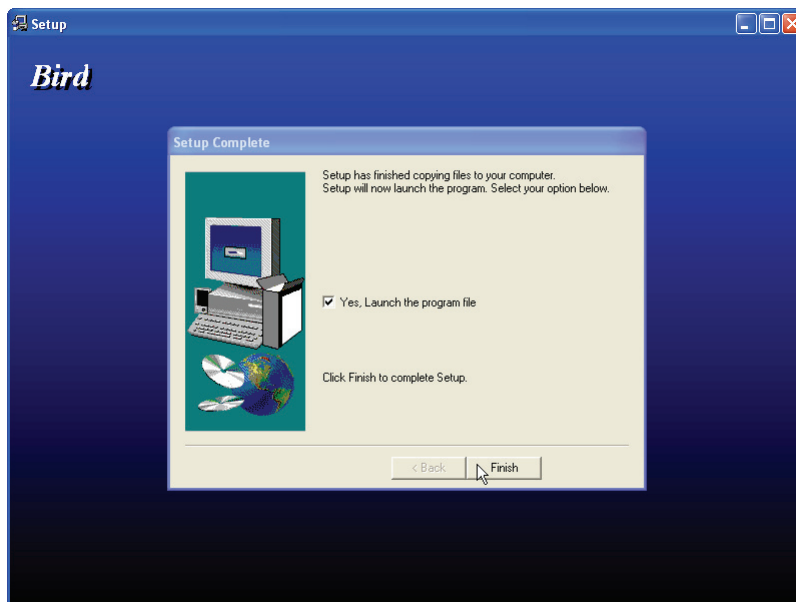
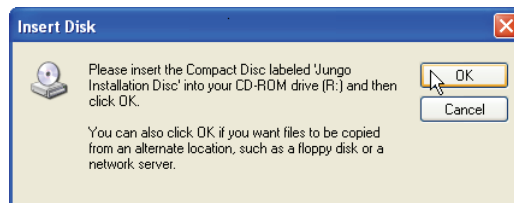
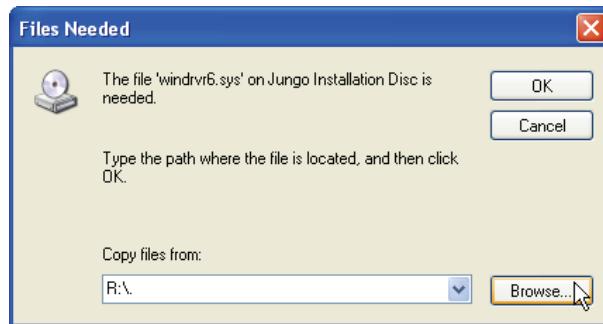


Figure A-1 Setup Complete

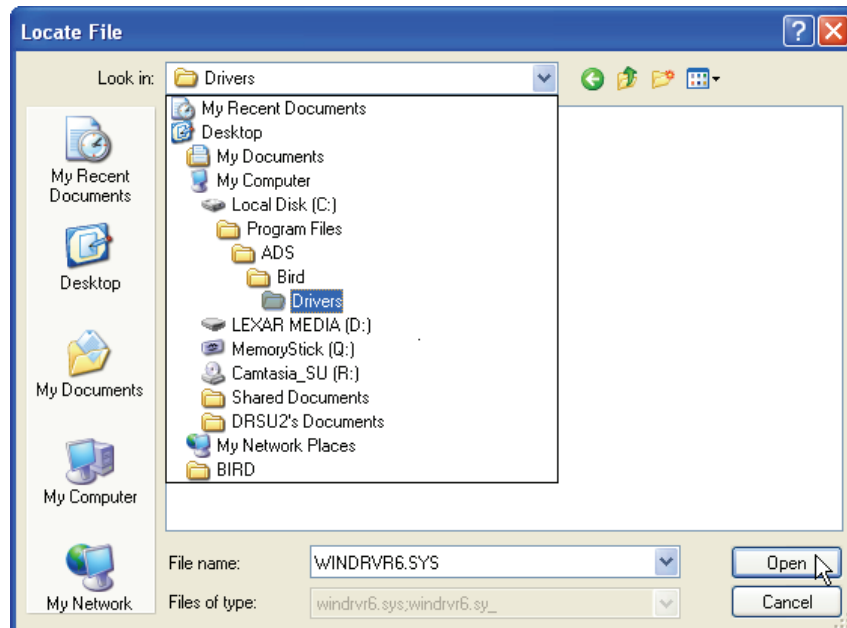
9. The BIRD software will need the Jungo Installation Disc, at the Insert Disk screen select, Ok.



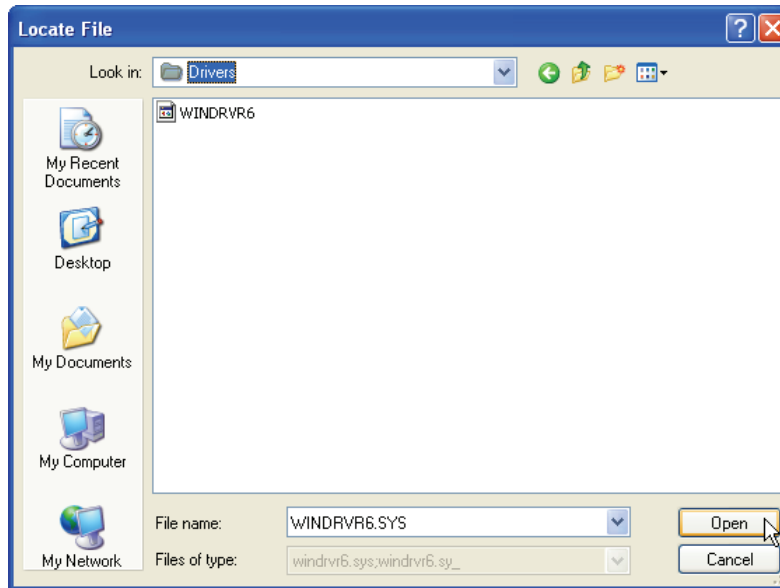
10. In the Files Needed box select BROWSE



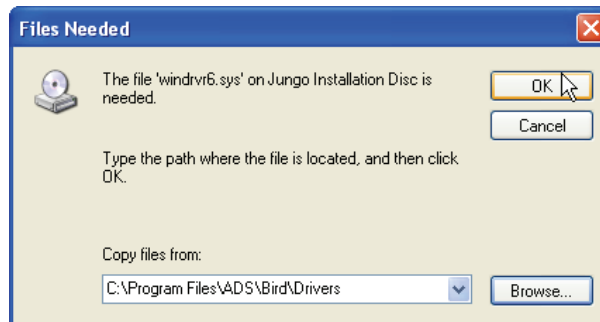
11. In the Locate File box create the path C:/Program Files/ADS/Bird/Drivers and select OPEN.



10. Once the WINDVR6.SYS file has been found select OPEN.



11. At the Files Needed box the path should appear, select OK.



12. Close BIRD folder.

After the installation, if you do not have a shortcut icon for the Bird, you can go into Windows Explorer and open C:\PROGRAM FILES\ADS\Bird. From there you can drag the shortcuts “blue torch icons” {Bird.EXE} out by pointing to it and holding down the left mouse button as you drag it off the screen.

APPENDIX - B

MJPEG CODEC

Installing MJPEG

MJPEG Codec compresses the Hawk File so it can be played back through Windows Media Player.

1. Go to the MJPG_CODEC Folder.
2. Select LEAD MCMP_MJPEGCodec.exe.

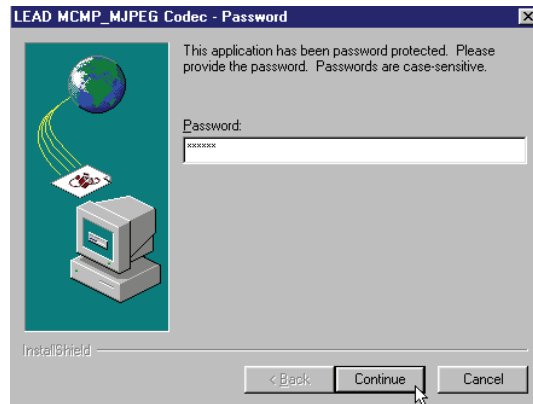


Figure B - Password

3. In the Lead MCMP_MJPEG Codec – Password type “showme” and select continue. Refer to **Figure B - Password**
4. File extraction begins.
5. In the Lead MCMP_MJPEG Codec with Free Converter screen select next.
6. In the License Agreement select Yes.
7. In the Choose Destination Location select next.
8. At the Select Program folder select next.
9. At the Install shield Wizard complete select Finish.

APPENDIX - C

WINDOWS MEDIA PLAYER

Installing Windows Media Player 7.1

If your computer does not correctly display AVI files install new Windows Media Player 7.1.

1. Go to My Computer and go to Hawk CD.
2. Select mp71.exe
3. In the Windows Media Player 7.1 Setup select Yes.
4. In the License agreement, select Yes and file extraction begins.
5. In the Windows Media Component Setup select next.
6. Check the box, 'I have read the Privacy Statement' select next.
7. In the Components screen make sure all boxes are checked select next.
8. In the Customize your Windows Media Player all boxes are checked select next.
9. In Windows Media Setup is ready to install select next.
10. In Setup has completed select Finish.

APPENDIX - D

UPDATE BINARY CODE

How to update HAWK Binary Code

1. Select **Utility** button.
2. Select **UPDATE RECORDER SOFTWARE**.

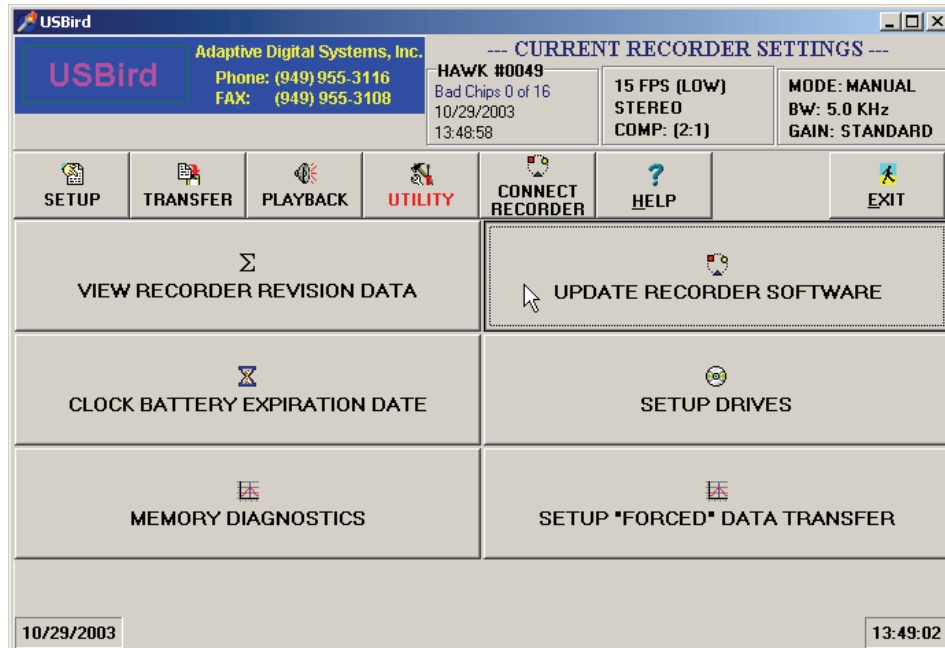


Figure D-1 UPDATE RECORDER SOFTWARE

3. In the Confirm box select **Yes**.

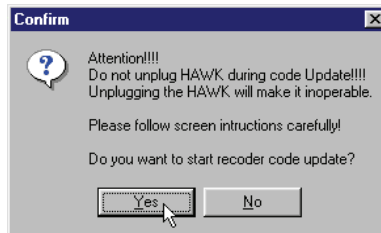


Figure D-2 Confirm box

Important!

Do not unplug the recorder while it is updating the binary code, this can cause malfunction in the Hawk. Code update takes approximately 40 seconds.

4. After binary code update is complete, select OK at the CODE UPDATED box.
Refer to figure **D-3 CODE UPDATED BOX**.
5. Binary code update is successful when “HEX CODE LOAD DONE” is displayed.
Refer to figure **D-4 HEX CODE LOAD DONE SCREEN**



Figure D-3 CODE UPDATED BOX

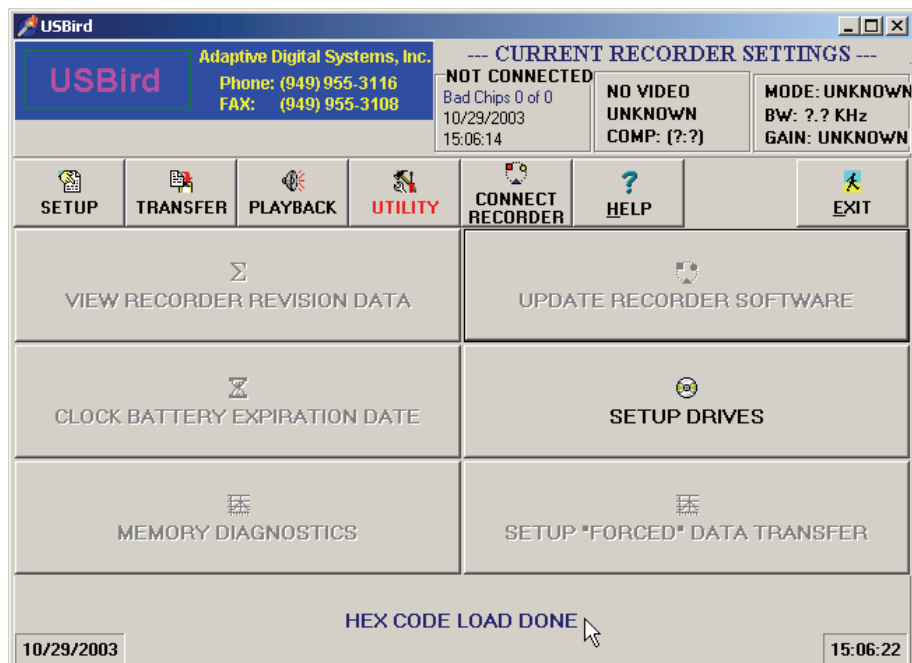


Figure D-4 HEX CODE LOAD DONE SCREEN

6. Disconnect RECORDER from USB cable for 10 seconds.
7. Reconnect RECORDER and select **CONNECT RECORDER**
8. Go to Setup and select the **APPLY CHANGES** button.

APPENDIX – E

SETUP DRIVES

1. Select **UTILITY**, and select **SETUP DRIVES**. Refer to **Figure E-1 Setup Drives**

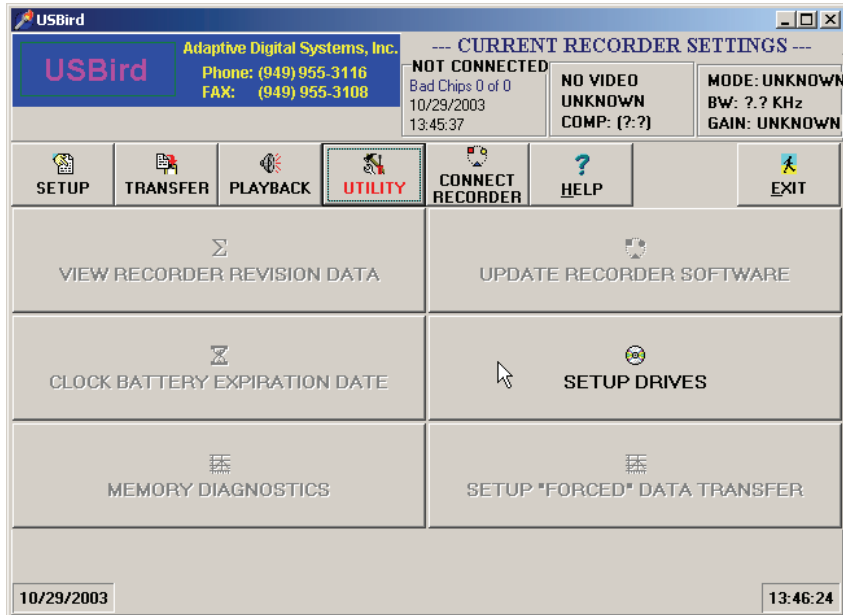


Figure E-1 Setup Drives

2. In Setup Drives select **ADD** Refer to **Figure E-2 Setup Drives**

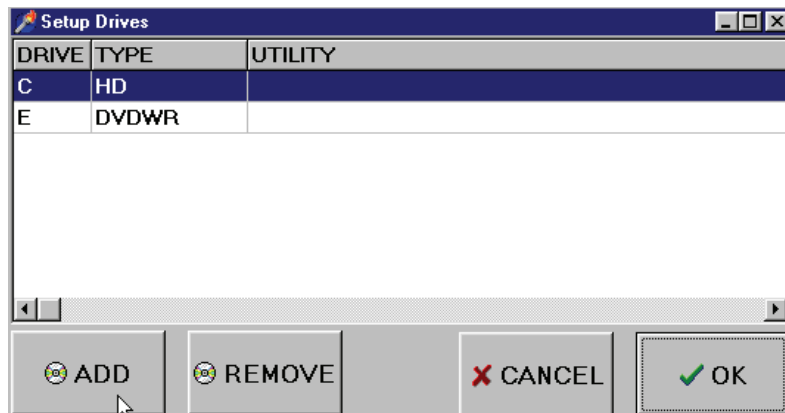


Figure E-2 Setup Drives

3. Select drive with corresponding letter, choose **TYPE** and select OK. Refer to **Figure E-3 Add Drives**

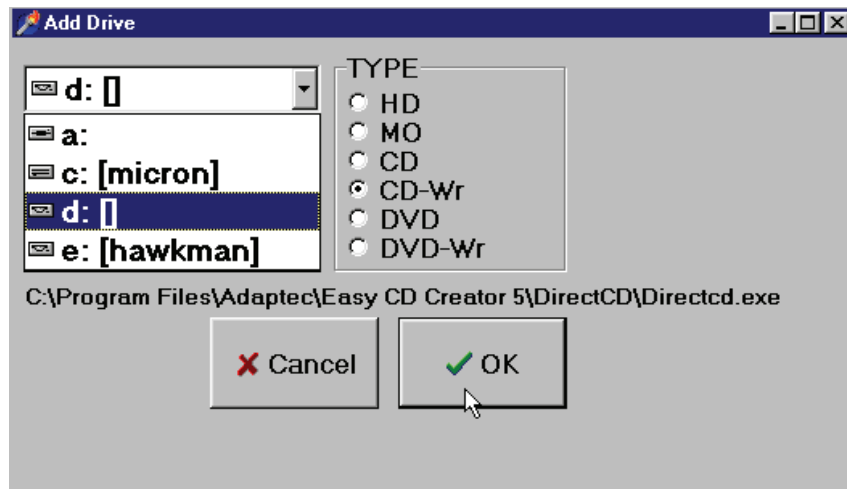


Figure E-3 Add Drives

4. If the space is blank, press Change Format Utility button, to select the format program. The path for ROXIO 5 is C:\Program Files\Adaptec\Easy CD Creator\DirectCD\directcd.exe. The path for ROXIO 6 is C:\Program Files\Roxio\Easy CD Creator 6\DragToDisc\DragToDisc.exe. Refer to **Figure E-4 CHANGE FORMAT UTILITY**

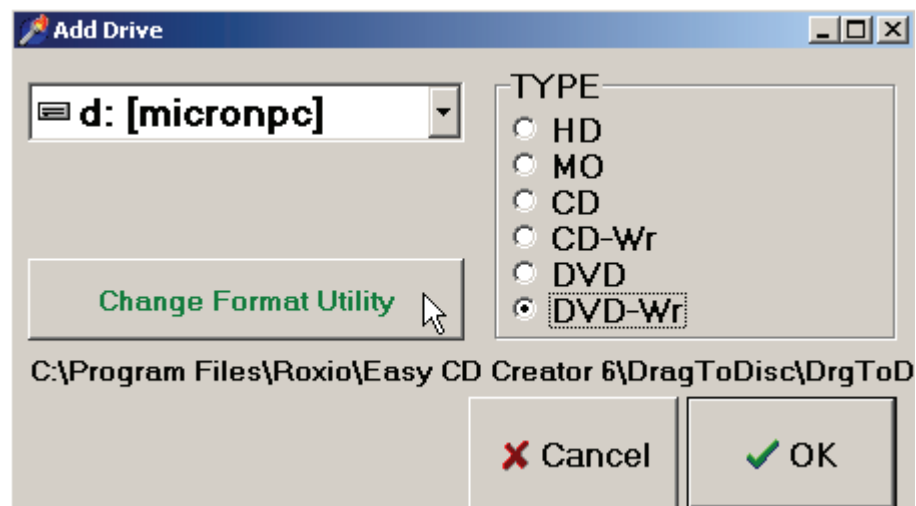


Figure E-4 CHANGE FORMAT UTILITY

5. The new drive will be added, select **OK**. Refer to **Figure E-5 New Drive Added**

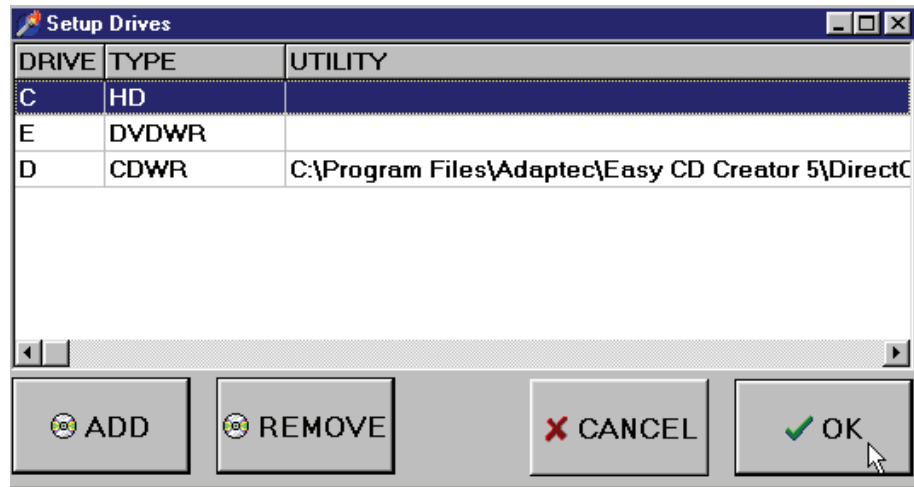


Figure E-5 New Drive Added

6. Now you can view the drives that were added. Refer to **Figure E-6 View Drives**

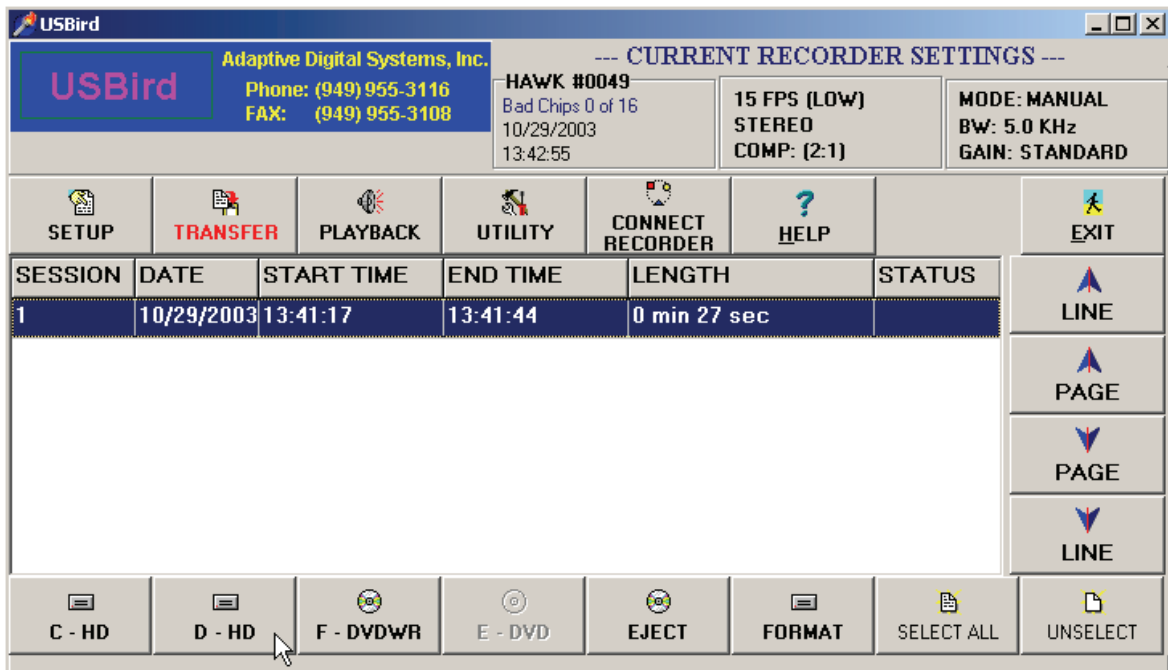


Figure E-6 View Drives

APPENDIX - F

BATTERY ORIENTATION

Proper battery placement is necessary in order for the recorder to function correctly. Use the battery diagram as a guide. **NEVER** remove batteries when device is recording.

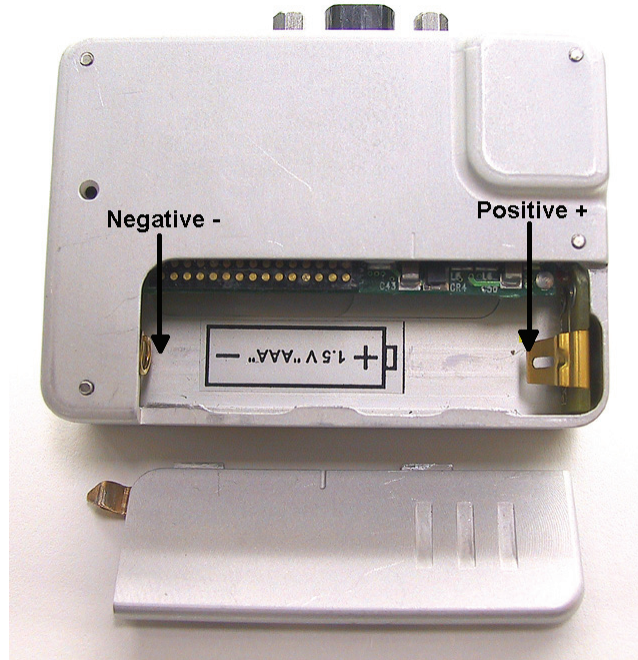


Figure G-1 Battery Diagram

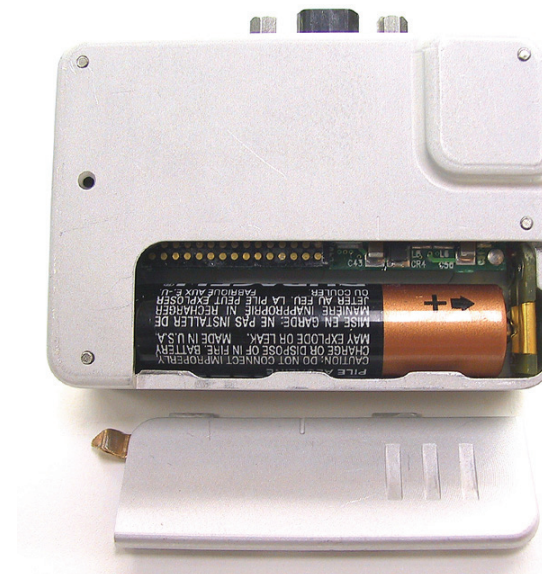


Figure G-2 Battery Installation

Always use a fresh battery when using the recorder and follow correct battery installation. Refer to **Figure G-2 Battery Installation**

APPENDIX-G

ADS SOFTWARE CONFIGURATIONS

This message was written to clear up some confusion that may exists on the various software and hardware releases that are out in the field.

FBIRDWIN 3.5 (and 3.X) is used with desktops and PDR (not PDR2) stations. This software will not run on Windows 2000, and Windows XP.

USBI 1.91 (and 1.0x) is used with the black USB boxes as well as the PCI card version. When the little black box is used

USBI software handles the following recorders:

**EAGLE2/A,
EAGLE4/A/C
FBIRD8/A/B
MONO2/A
MONO4
FLEX8B**

“**Bird**” 5 (5.XY) is used on all new recorders that have a built in USB port. In fact, everything to be released from now on will use this software. The recorders already using the USBird 3.05 software are:

**HAWK
FALCON
EAGLE8/A /A2 /A3 / B / B2 /C /C1
MONO8/ A
FLEX8C /C2 / D/ E**

NOTE!! Much like the “FBPLAYER” is burned onto the evidence “CD”, a program called “USBirdPLAYER” will be burned onto the CD / DVD using the USBird 2.00 and later releases. The “USBirdPLAYER” can be called up from the evidence CD / DVD and the video/ audio be player without any additional software from ADS. The USBirdPLAYER software can also be used to make “.AVI” copies which can be burned onto CD / DVD.

APPENDIX – H

ROXIO 6

FORMAT BLANK CDs / DVDs

1. Select FORMAT button from the Transfer screen. *Refer to Figure H-1 SELECT FORMAT*
2. Select the drive letter for burner and select FORMAT. *Refer to Figure H-2 DRIVE LETTER*

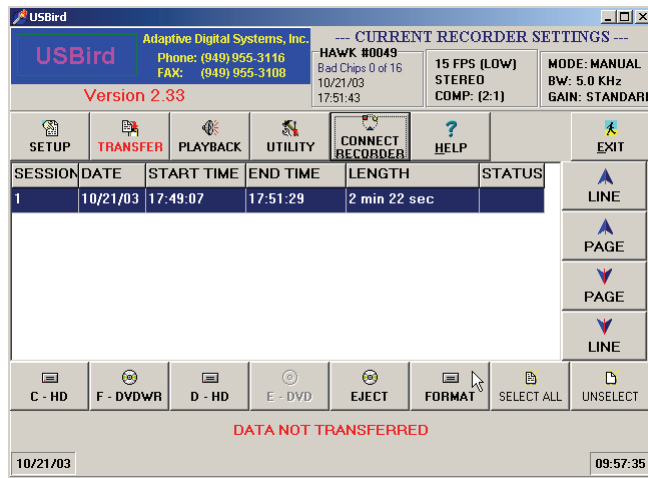


Figure H-1 SELECT FORMAT

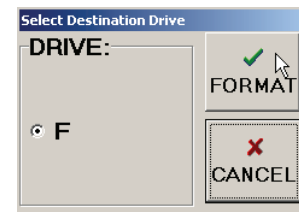


Figure H-2 DRIVE LETTER

3. The Roxio Drag to Disc interface appears. *Refer to Figure H-3 DRAG TO DISC INTERFACE*
4. Right mouse click on the interface, and select Format Disc. *Refer to Figure H-4 FORMAT DISC*



Figure H-3 DRAG TO DISC INTERFACE

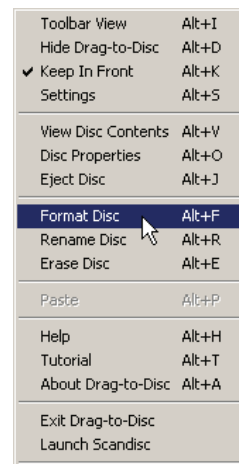


Figure H-4 FORMAT DISC

5. Enter Volume Label, which will be the name given to the CD and select OK.
Refer to Figure H-5 VOLUME LABEL

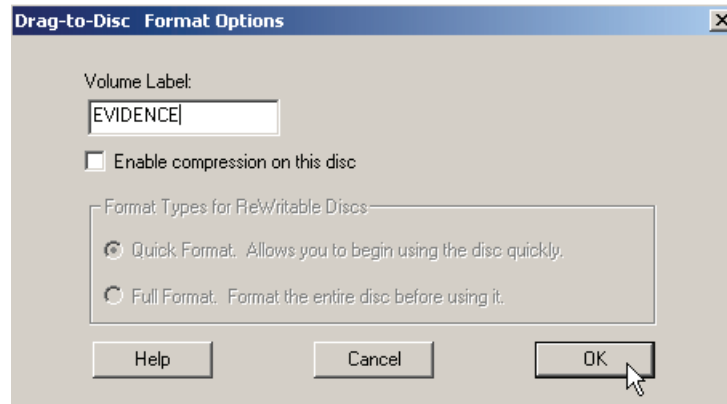


Figure H-5 VOLUME LABEL

6. After Format is complete, the Drag to Disc icon will appear with the disk name.
Refer to Figure H-6 ICON

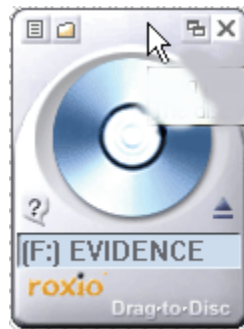


Figure H-6 ICON

EJECTING THE CD / DVD MEDIA

1. Select EJECT button. *Refer to Figure H-7 SELECT BUTTON*

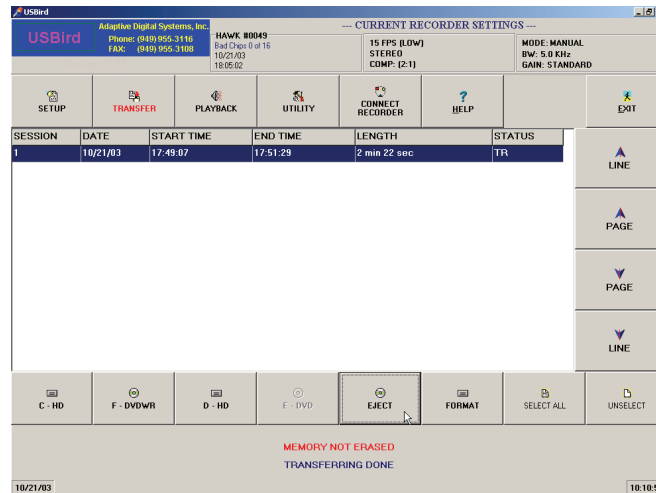


Figure H-7 SELECT BUTTON

2. Select the DRIVE letter and select EJECT. *Refer to Figure H-8 DRIVE LETTER*

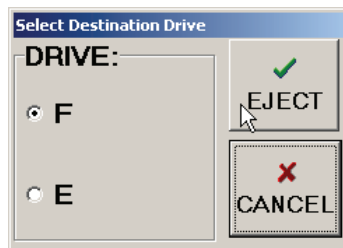


Figure H-8 DRIVE LETTER

3. Select the first **and** second options. *Refer to Figure H- 9 EJECT OPTIONS*
4. Select the EJECT button. *Refer to Figure H- 9 EJECT OPTIONS*

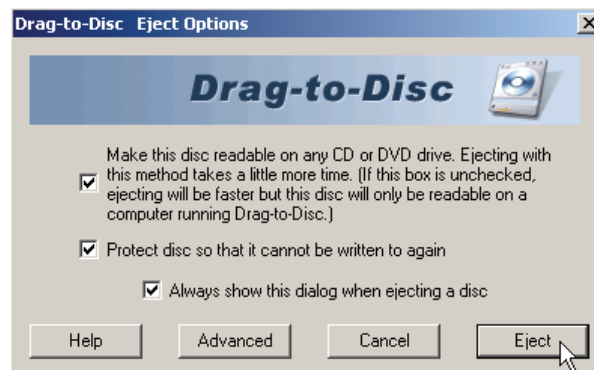


FIGURE H- 9 EJECT OPTIONS

APPENDIX - I

TROUBLE SHOOTING

Most problems can be solved by referring to the USBIRD MANUAL.

Before you use the recorder, make sure memory has been erased. If you press the record button and see three blinking lights you must erase the recorder memory. The memory cannot not be overwritten, after you completely erase the memory the recorder will begin recording.

Always test the recorder before you deploy it. Make sure audio and video are working properly. Always use fresh batteries, and give rechargeable batteries enough time to recharge.

All external cables and connectors are fastened securely and all cameras are in focus.

All external microphones are in a good audio position to capture audio.

The external on / off switch should be on the off position when you are attaching the switch to the recorder.

No other USB devices can be attached to the computer while you are using a recorder. If you need to attach another USB device such as a USB printer, scanner, mouse, use a USB HUB. The USB HUB should be the only device attached to the computer and all devices should be plugged into the USB HUB.

VIDEO DOES NOT PLAYBACK. Install MJPEG codec.